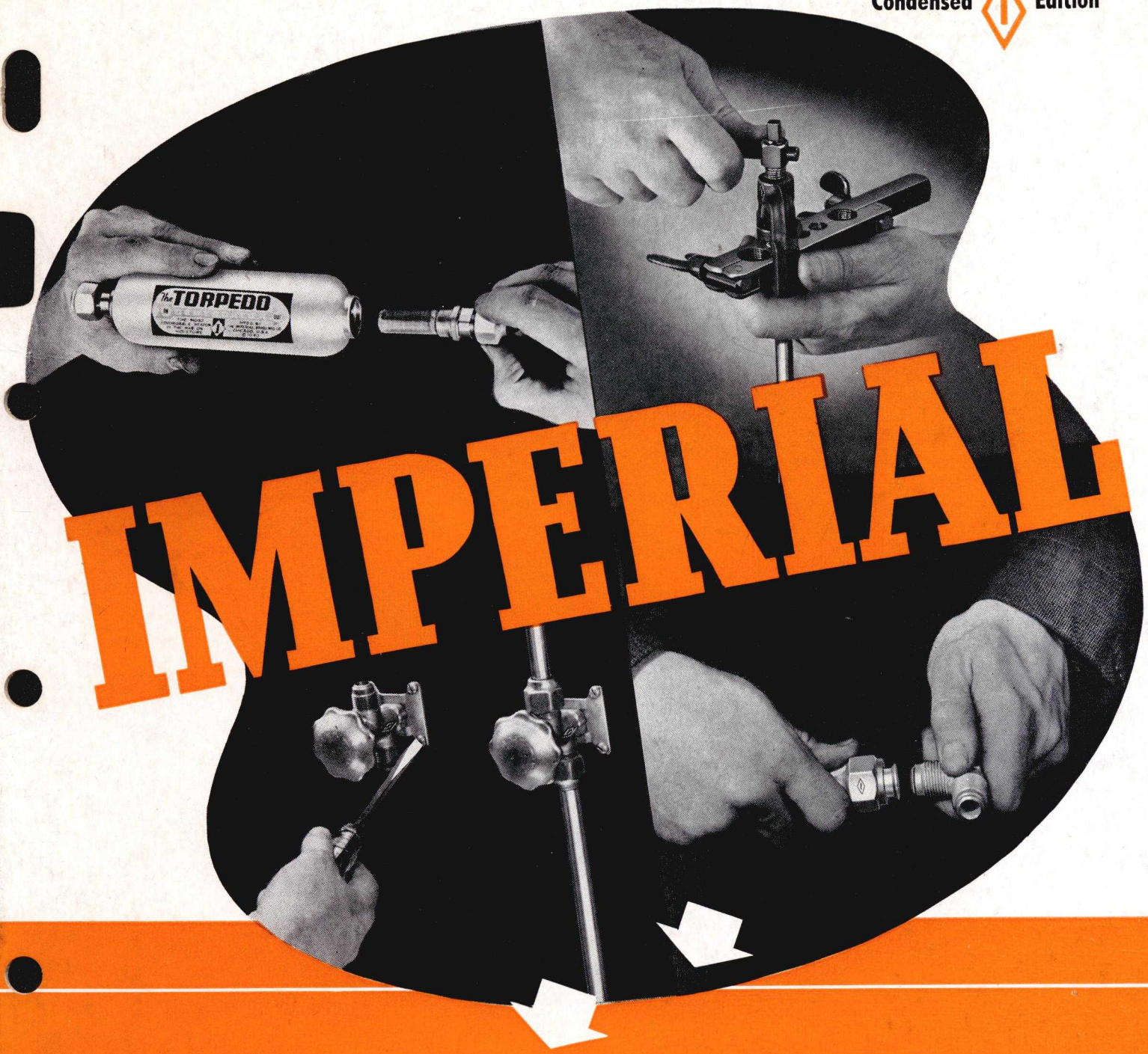
CATALOG No. 88-L

Condensed Edition



IMPERIAL

Refrigeration and Air Conditioning Products

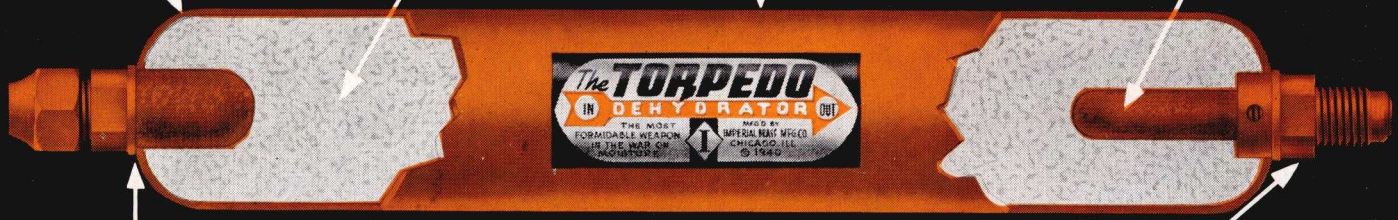
YOUR BEST WEAPON IN THE WAR ON MOISTURE

One piece streamlined shell provides greater strength than old designs—facilitates flow of refrigerant.

Filled with Silica Gel.

Copper and brass construction throughout.

Finger-type fine mesh monel metal screen, of welded construction, integral with outlet connection. Simply unscrew connection to refill dehydrator or clean screen.


The TORPEDO
IN
DEHYDRATOR
OUT
THE MOST FORMIDABLE WEAPON IN THE WAR ON MOISTURE
MFG'D BY IMPERIAL BRASS MFG CO CHICAGO, ILL. © 1940

Brazed — no soft solder joint that might loosen.

Fewer joints —less chance for leakage.

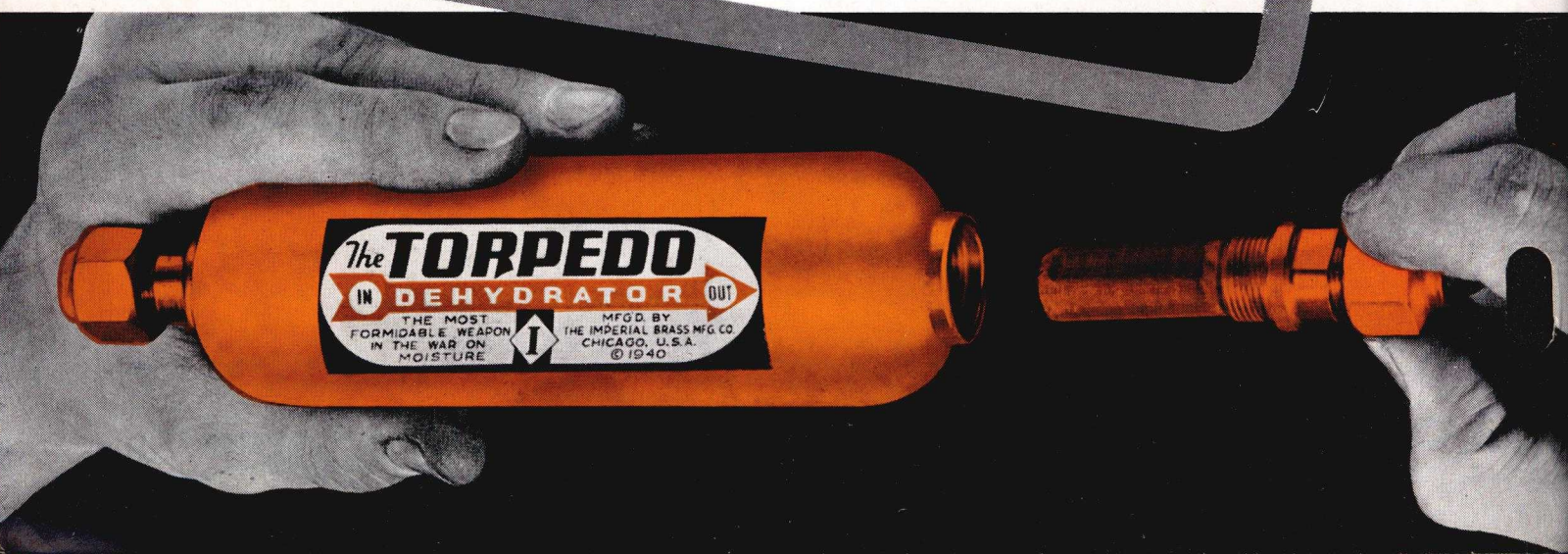
Available in sizes up to 7 H.P.

Easy to refill—no bolts to unscrew and no flanges, springs or loose screens to remove before refilling.

The TORPEDO that smashed old ideas of Dehydrator Design—

When the Imperial Torpedo Dehydrator was announced in 1940, it introduced an entirely new conception of dehydrator design and dehydrator efficiency. It pioneered the one piece streamlined shell (from which it took its name "Torpedo"). This design offers such marked advantages as greater strength, easier passage of refrigerant and fewer joints.

And it introduced the finger-type outlet screen which provides more efficient filtering, less chance of clogging and easier removal for cleaning and refilling. Sectional view above evidences its leadership in design and shows why it has won widespread preference in the industry.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CATALOG NO. 88-L
Condensed Edition

IMPERIAL

Refrigeration and Air Conditioning Products

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THE IMPERIAL BRASS MANUFACTURING CO.
1200 W. Harrison St., Chicago 7, Illinois

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IMPERIAL REFRIGERATION VALVES

Imperial Refrigeration Valves are made of heavy brass forgings, and are non-porous, strong and uniform. The forging process makes Imperial Valves resistant to such penetrating refrigerants as Sulphur Dioxide, Ethyl Chloride, Methyl Chloride, and Freon.

Valves with flare connection have the Imperial Triple-Seal Groove.

Valve bodies, seats and needles are machined to great accuracy.

Base plates, when used, are made of extra heavy, cadmium plated steel. A special non-twisting feature prevents screws holding base plates to valve from shearing under strain of assembling and operating valves.

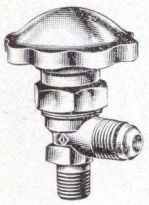
Threads are fitted with protectors to prevent damage before they are put into service.

"SYLPAK" SHUT-OFF VALVES

Patent No. 1,992,902

Positive; dependable; meet the exacting demand of refrigeration. S.A.E. or solder fitting. Sylphon principle used. Sylphon may be changed, in case of rupture, with valve under pressure, without losing refrigerant. Valve will withstand pressures greater than found in refrigeration. Non-porous, strong, uniform brass forged body with two flat sides, giving substantial wrench surface. Valve stems are made of stainless steel. Hand wheel 2¼" in diameter.

No. 192-C



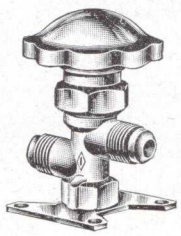
S.A.E. Flare O.D. of Tube	Iron Pipe Thread	List Price Each
¼"	¼"	$ 5.00
¼"	⅜"	5.00
⅜"	¼"	5.00
⅜"	⅜"	5.00
½"	⅜"	5.00
⅝"	½"	6.00
¾"	½"	10.00

No. 192-CS

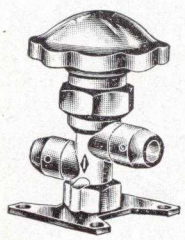
Solder O.D. of Tube	Iron Pipe Thread	List Price Each
¼"	¼"	$ 5.00
¼"	⅜"	5.00
⅜"	¼"	5.00
⅜"	⅜"	5.00
½"	⅜"	5.00
⅝"	½"	6.00
¾"	½"	10.00

No. 193-C

S.A.E. Flare O.D. of Tube	List Price Each
¼"	$ 5.30
⅜"	5.30
½"	5.30
⅝"	6.60
¾"	13.50
¼" Fem. I.P.T.	6.60
⅜" Fem. I.P.T.	6.60



No. 193-CS

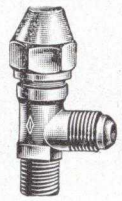


Solder O.D. of Tube	List Price Each
¼"	$5.30
⅜"	5.30
½"	5.30
⅝"	6.60
¾"	13.50

BRASS VALVE HANDLE

For operating shut-off valves. One of the types required by Refrigeration Codes in many cities. 2-$^{3}/_{16}$" in diameter. Weight 20 lbs. Per 100.

No. 296-C—Brass Valve Handle. Each **$0.65**



No. 62-C ANGLE SHUT-OFF VALVE

For liquid receivers, manifolds, evaporator heads, or for use as compressor valves. Has two flat sides which give substantial wrench surface to make assembly quick and easy.

All sizes of this valve are made with full size openings.

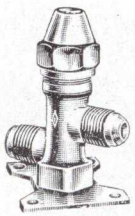
Complete with hex brass seal cap.

No. 62-C

S.A.E. Flare O.D. of Tube	Iron Pipe Thread	List Price Each
¼"	¼"	$2.30
⅜"	¼"	2.30
⅜"	⅜"	2.30

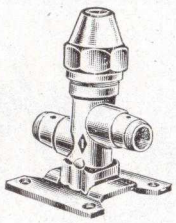
TWO-WAY LINE SHUT-OFF VALVE

Here is an ideal valve for multiple connections. It has heavy gauge steel base plate and hex brass seal cap. All sizes have full sized openings. The inside passages of all sizes are equal to or larger than S.A.E. drill specifications.



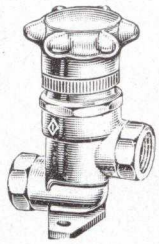
No. 63-C

Outside Diam. of Tube	List Price Each No. 63-C Flare Conn.	No. 63-CS Solder Conn.
¼"	$3.60	$3.60
⅜"	3.60	3.60
½"	3.60	3.60
⅝"	5.35	5.35



No. 63-CS

No. 193-C IMPERIAL BACK-SEATING PACKLESS LINE SHUT-OFF VALVE



This packless line shut-off valve is of the back-seating type and is furnished with female iron pipe thread.

Body of the valve is forged brass. Has drawn brass back seat; special sylphon; cadmium plated steel operating spring; cast bronze operating cap; and a rubber moisture seal.

Female Iron Pipe Thread	List Price Each
½" Fem. I.P.T.	$10.70
¾" Fem. I.P.T.	26.00

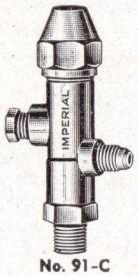
EXTRA SYLPHONS FOR "SYLPAK" VALVES

No. of Sylphon	Height of Sylphon	Diam. of Sylphon	Diam. of Flange	List Price Each
31336	1-$^{1}/_{16}$"	¾"	1-$^{5}/_{16}$"	$1.70
35155	1½"	1-$^{1}/_{16}$"	1$^{27}/_{64}$"	2.50

BACK-SEATING SHUT-OFF VALVES
For Liquid Receivers and Compressors

These valves are the same excepting the flared and iron pipe connections are reversed. Plug connection at side of valve, for drawing vacuum, dehydrating and charging, is 1/8" I.P.T.

Furnished complete with Hex Brass Seal Cap.



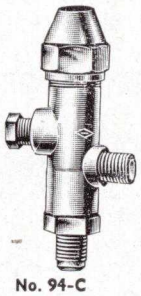
No. 91-C

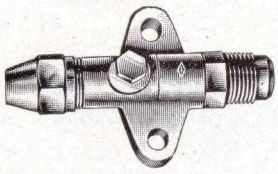
NO. 91-C

S.A.E. Flare O.D. of Tube	Iron Pipe Thread	List Price Each
1/4"	1/4"	$4.00
3/8"	1/4"	4.00

NO. 94-C

1/4"	1/4"	$4.00
3/8"	1/4"	4.00


No. 94-C



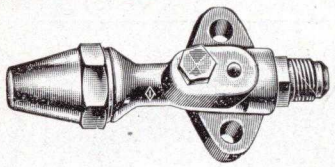
COMPRESSOR VALVES
With Back-Seating Needle Shut-Off

A Compressor Valve for domestic units. Constructed for long wear. Complete with Hex Brass Seal Cap and standard pipe plug. Has 1/8" I.P.T. gauge tapping. Prices shown are for flat base. Prices for raised base on application.

Catalog No.	S.A.E. Flare—O.D. of Tube 1/4"	3/8"	1/2"	Thickness of Flange	Bolt Hole Centers	Diam. of Bolt Hole
43-C	$4.00	$4.00	$4.00	7/8"	1 3/8"	11/32"
44-C	4.00	4.00	4.00	5/8"	1 1/2"	11/32"
45-C	4.00	4.00	4.00	5/8"	1 5/8"	11/32"
46-C	4.25	4.25	4.25	5/8"	1 3/4"	11/32"

No. 257-C HEAVY DUTY COMPRESSOR VALVE
With Back-Seating Needle Shut-Off

Heavy-duty valve for large compressors. Regularly furnished with 1/8" I.P.T. gauge tapping, but can also be furnished with 1/4" I.P.T. gauge tapping. Can also be tapped between seats



S.A.E. Flare O.D. of Tube	Bolt Hole Centers	Diam. of Bolt Hole	Thickness of Flange	List Price Ea. No. 257-C Flat Base
1/4"	1 5/8"	11/32"	7/8"	$5.50
3/8"	1 5/8"	11/32"	5/8"	5.50
1/2"	1 5/8"	11/32"	7/8"	5.50
5/8"	1 5/8"	11/32"	7/8"	5.80

IMPERIAL FLANGE ADAPTERS

No. 197-C Female I.P.T.

I.P.T.	Bolt Ctrs.	List Price Per 100
1/4"	1 5/8"	$150.00
3/8"	1 5/8"	170.00

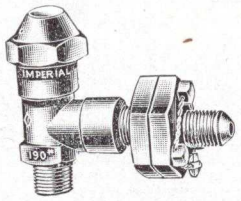
No. 198-C Male I.P.T.

I.P.T.	Bolt Ctrs.	List Price Per 100
1/4"	1 5/8"	$150.00
3/8"	1 5/8"	150.00

FLANGE ADAPTER GASKETS
No. 196-C

Bolt Hole Centers	List Price Per 100
1 5/8"	$5.00

COMBINATION RELIEF VALVE and RUPTURABLE DISC



The purpose of this valve is to relieve excessive pressure in a refrigeration system with a minimum loss of gas. It consists of a conventional spring-loaded relief valve, which is set and sealed at the factory, and an approved rupture disc.

When disc is ruptured, instead of entire refrigerant charge being lost—as with an ordinary rupture disc—only that amount of gas will be lost that is necessary to reduce pressure to a point where spring-loaded valve closes.

Will not seep gas because of vibration, pulsation or loss of spring tension.

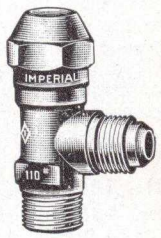
Built to conform with the Refrigeration Codes in many cities.

Furnished in the following relief pressures: **150 — 190 — 220.** Specify Catalog Number, Inlet and Outlet Sizes and Pressure Setting when ordering.

No. 380-C

Bottom or Inlet Male I.P.T.	Side or Outlet O.D. S.A.E. Flare	Pressure Setting	List Price Each
3/8"	3/8"	150 lbs.	$13.00
3/8"	3/8"	190 lbs.	13.00
3/8"	3/8"	220 lbs.	13.00
1/2"	1/2"	150 lbs.	13.00
1/2"	1/2"	190 lbs.	13.00
1/2"	1/2"	220 lbs.	13.00

IMPERIAL RELIEF VALVES
For Sulphur Dioxide, Methyl and Freon



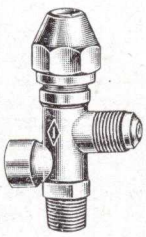
This Relief Valve is built to conform with the Refrigeration Codes in many cities. Valve is installed in high side and outlet connection leads to atmosphere or low side. Should the pressure in the system be excessive at any time the valve will open at its set relief pressure.

Body is a brass forging with special composition seat and all other parts are brass or bronze.

Furnished for the following relief Pressures: **90—110—135—150—180—195—210.** Specify Catalog Number, Size and Relief Pressure.

No. 280-C

Bottom or Inlet	Side or Outlet	List Price Each
3/8" Male IPT	3/8" O.D. S.A.E. Flare	$6.50
1/2" Male IPT	5/8" O.D. S.A.E. Flare	8.00



RECEIVER TANK VALVE
With Relief Outlet

For use with our No. 280-C Relief Valve, shown above. No. 621-F Fusible Plug and No. 248-F Fusible Half Union, page 12, may also be used with this valve.

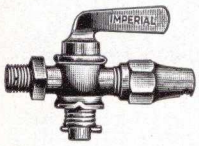
No. 208-C Receiver Tank Valve with Relief Outlet, 3/8" flare x 1/4" Male I.P.T. x 1/4" Fem. I.P.T. Relief Connection.
List Price Each $3.80

SMALL SERVICE DRUM VALVE

For use on small service tanks carrying any liquid refrigerant except ammonia. Exposed stem is made of monel metal. Screened inlet. Body is heavy brass forging. Valve furnished without fusible metal safety plug unless otherwise specified. 1/8" female I.P.T. outlet and 3/8" male I.P.T. tank connection.

No. 227-C Small Service Drum Valve, Each . . **$3.30**
No. 227-CF Small Service Drum Valve with Fusible Metal Plug, Each **3.60**

SHUT-OFF VALVES FOR ELECTROLUX INSTALLATIONS

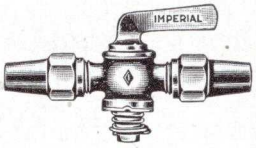


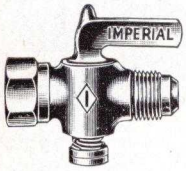
This valve is furnished for 3/8" O.D. copper tubing on one end and 1/4" male iron pipe thread on the other, complete with nut.

No. 157-SAE Shut-Off Valve, List Each **$1.50**

This valve has connections for 3/8" O.D. copper tubing on both ends. Furnished complete with nuts.

No. 158-SAE Shut-Off Valve, List Each **$1.60**





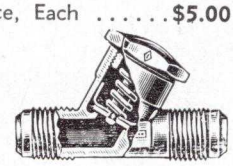
An ideal valve for use between strainer and gas line connection. 3/8" O.D. Female S.A.E. Thread on one end, which fits on the strainer and 3/8" Male S.A.E. Thread on other end. Furnished with gasket.

No. 159-SAE Shut-Off Valves, List Each **$1.50**

IMPERIAL CONTROL AND CHECK VALVE

Prevents the flow of gases in the suction line from one coil to the other or to any individual coil from the common suction line. This eliminates condensation of warm gas in colder coil, stops frosting of suction lines, and provides better regulation of entire system. In addition, it shortens the running time of compressor, and gives positive temperature control when used with various types of pressure or temperature regulating valves usually installed in refrigerating systems.

No. 180-C 3/8" O.D. S.A.E. List Price, Each **$5.00**
No. 180-C 1/2" O.D. S.A.E. List Price, Each **5.00**
No. 180-C 5/8" O.D. S.A.E. List Price, Each **6.20**



IMPERIAL No. 211-C HI-SIDE FLOAT

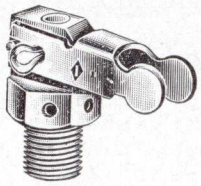
A positive control of the flow of the refrigerant into the evaporator under all conditions. Can be used with sulphur dioxide, methyl chloride or freon. Self-purging by means of adjustable bypass, which can be used also for manual purging. Maximum carrying capacity of approx. 1/2 ton.

All steel construction, copper hydrogen brazed throughout.

Internal parts are brass or bronze, eliminating corrosion. Inlet connection on top of float 1/4" Fem. I.P.T. Outlet connection 1/4" flare. Tested under 200 pounds pressure. Overall height 8 3/8". Widest diameter 3 1/4".

No. 211-C Imperial Hi-Side Float, List Price, Each . . . **$9.75**
No. 211-CM Imperial Hi-Side Float replacement for Majestic. Inlet 1/4" Fem. I.P.T., outlet 5/16" flare. List Price, Each **9.75**

IMPERIAL NEEDLE VALVE ASSEMBLY

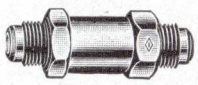


Replacement needle valve assembly for General Electric and Westinghouse Hi-Side Floats. Has stainless steel needle and special bronze alloy body.

When installing, base of float must be drilled and tapped for 1/8" Iron Pipe Thread.

No. 310-C Imperial Needle Valve Assembly. List Price, Each **$3.00**

IMPERIAL LOADED CHECK VALVE

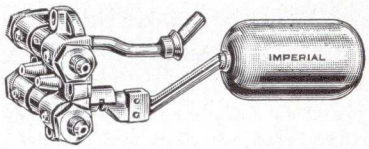


All parts in this Loaded Check Valve are made of brass or bronze, with the exception of the needles, which are made of non-corrosive, stainless steel.

1/4" male flare thread on both ends. Dehydrated and capped with 2 No. 626-F Lead Protector Caps.

No. 206-C Spring Loaded Check Valve, for sulphur dioxide, methyl chloride, or freon. Specify refrigerant to be used. List Price, Each **$3.50**

IMPERIAL LOW SIDE FLOAT



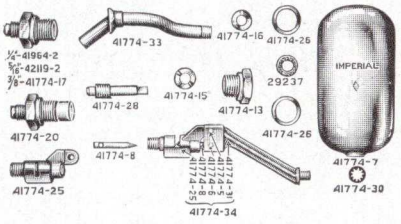
Designed to fit the Mullins Evaporators.

The needle valve assembly is of a simple, well-tried design. Liquid level and skimmer level are set at factory. Will give about a 3/8" oil blanket.

Forged brass header with four bolt holes on 2.859" centers. Header has capped shut-off valves at both inlet and outlet and screened inlet fitting.

Furnished with 1/4" flare connection on inlet and 1/4", 5/16" or 3/8" flare outlet. Furnished for right or left hand assembly. Unless otherwise specified, right hand assembly with 1/4" inlet and 3/8" outlet will be furnished.

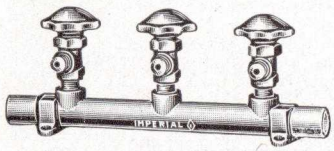
No. 213-C Imperial Low Side Float. List Each **$24.00**
No. 222-C Lead Gasket. For use when float is used with Mullins Evaporators. List Each . . . . . **.09**



REPLACEMENT PARTS FOR No. 213-C LOW SIDE FLOAT

Part No.	Description	List Price Each
29237	Packing	$0.20
41774-5	Pivot Pin for Guide	.10
41774-6	Pin for Needle	.10
41774-7	Float	3.00
41774-8	Needle	1.80
41774-13	Cap	.26
41774-15	Headless Screw Plug	.14
41774-16	Washer	.10
41774-17	3/8" O.D. Flare Outlet (Suction Line) Connection	.70
41774-20	1/4" O.D. Flare Inlet (Liquid Line) Connection with screen	.90
41774-25	Needle Guide Assembly	1.60
41774-26	Gasket	.10
41774-28	Valve Stems	.40
41774-30	Lock Washers	.06
41774-31	Float Arm	2.00
41774-33	Skimmer Tube Assembly	.90
41774-34	Needle and Arm Assembly	5.00
41964-2	1/4" O.D. Flare Outlet (Suction Line) Connection	.70
42119-2	5/16" O D. Flare Outlet (Suction line) Connection	.70

IMPERIAL FORGED BRASS MANIFOLDS



Imperial manifold bars are made of forged brass with mounting brackets integral with the body, a feature that assures strength and rigidity. The forging process makes these manifold bars non-porous, strong and uniform, and resistant to such penetrating refrigerants as Sulphur Dioxide, Ethyl Chloride, Methyl Chloride and Freon. (At left, manifold bar with valves.)

Manifolds are tapped with ½" female iron pipe thread on each end, and are also machined on both ends for 1⅛" O.D. solder connections. Valve ports are drilled on 3¾" centers. Two or more manifolds can be quickly joined together.

Manifolds can be supplied either with or without valves. When units complete with valves are specified, they are furnished with "Sylpak" Shut-off Valves. These valves are available with ¼", ⅜", ½", ⅝", or ¾" tubing connections.

MANIFOLDS ASSEMBLED WITH NO. 192-C or 192-CS SYLPAK ANGLE VALVES

Tube Size Outlet of Valve	Number of Valves	With ½" Fem. Iron Pipe Thread and 1⅛" O.D. Male Solder Connections: Catalog No. Outlet of Valve for S.A.E. Fitting	Catalog No. Outlet of Valve for Solder Joint	List Price Each
		Manifolds with ¼" Valves		
¼"	2	124-MF	124-MS	$12.80
¼"	3	134-MF	134-MS	19.00
¼"	4	144-MF	144-MS	25.20
¼"	5	154-MF	154-MS	31.40
¼"	6	164-MF	164-MS	37.60
¼"	7	174-MF	174-MS	43.80
¼"	8	184-MF	184-MS	50.00
¼"	9	194-MF	194-MS	56.20
¼"	10	1104-MF	1104-MS	62.40
		Manifolds with ⅜" Valves		
⅜"	2	126-MF	126-MS	12.80
⅜"	3	136-MF	136-MS	19.00
⅜"	4	146-MF	146-MS	25.20
⅜"	5	156-MF	156-MS	31.40
⅜"	6	166-MF	166-MS	37.60
⅜"	7	176-MF	176-MS	43.80
⅜"	8	186-MF	186-MS	50.00
⅜"	9	196-MF	196-MS	56.20
⅜"	10	1106-MF	1106-MS	62.40
		Manifolds with ½" Valves		
½"	2	128-MF	128-MS	12.80
½"	3	138-MF	138-MS	19.00
½"	4	148-MF	148-MS	25.20
½"	5	158-MF	158-MS	31.40
½"	6	168-MF	168-MS	37.60
½"	7	178-MF	178-MS	43.80
½"	8	188-MF	188-MS	50.00
½"	9	198-MF	198-MS	56.20
½"	10	1108-MF	1108-MS	62.40
		Manifolds with ⅝" Valves		
⅝"	2	1210-MF	1210-MS	17.90
⅝"	3	1310-MF	1310-MS	26.65
⅝"	4	1410-MF	1410-MS	35.40
⅝"	5	1510-MF	1510-MS	44.15
⅝"	6	1610-MF	1610-MS	52.90
		Manifolds with ¾" Valves		
¾"	2	1212-MF	1212-MS	25.90
¾"	3	1312-MF	1312-MS	38.65
¾"	4	1412-MF	1412-MS	51.40
¾"	5	1512-MF	1512-MS	64.15
¾"	6	1612-MF	1612-MS	76.90

FORGED MANIFOLD BARS ONLY With ½" Female I.P.T. and 1⅛" O.D. Male Solder Connections

The ends of these manifolds are machined 1⅛" O.D. and are tapped with ½" I.P.T. Either threaded adapters or 1⅛" O.D. solder fittings may be used in making connections.

I.P.T. Size of Valve Tapping	No. of Ports	Overall Length	Catalog No.	List Price Each
⅜"	2	8½"	172-CS	$4.80
½"	2	8½"	172-CS	4.80
⅜"	3	12¼"	173-CS	7.00
½"	3	12¼"	173-CS	7.00

"SYLPAK" SHUT-OFF VALVES

Patent No. 1,992,902

When manifolds are specified assembled with valves, "Sylpak" Shut-off Valves are furnished. These valves are positive, dependable and meet the exacting demands of refrigeration. Available with either S.A.E. flare or solder fitting connections. The sylphon principle is used. In case of rupture, the sylphon may be changed with valve under pressure without losing the refrigerant.

"Sylpak" valves will withstand pressure greater than those found in refrigeration. They have non-porous, strong, uniform brass forged body with two flat sides, which gives substantial wrench surface. Valve stems are made of stainless steel. The hand wheel is 2¼" in diameter.

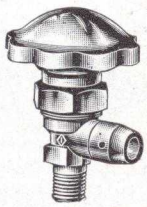
No. 192-C

No. 192-C

S.A.E. Flare O.D. of Tube	Iron Pipe Thread	List Price Each
¼"	¼"	$ 5.00
¼"	⅜"	5.00
⅜"	¼"	5.00
⅜"	⅜"	5.00
½"	⅜"	5.00
⅝"	½"	6.00
¾"	½"	10.00

No. 192-CS

Solder O.D. of Tube	Iron Pipe Thread	List Price Each
¼"	¼"	$ 5.00
¼"	⅜"	5.00
⅜"	¼"	5.00
⅜"	⅜"	5.00
½"	⅜"	5.00
⅝"	½"	6.00
¾"	½"	10.00

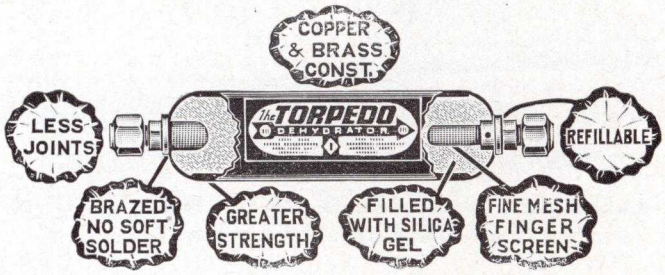


No. 192-CS

IMPERIAL *TORPEDO* DEHYDRATORS—Refillable

Pat. No. 2,309,181

The Most Formidable Weapon in the War on Moisture



This is the dehydrator that has introduced to the refrigeration industry an entirely new standard of dehydrator design and dehydrator efficiency.

It has a one-piece streamlined shell which offers such marked advantages as greater strength, easier passage of refrigerants and fewer joints.

Opening and refilling the Torpedo Dehydrator is just a matter of seconds. It has a finger-type, monel metal outlet screen of welded construction which is integral with outlet connection, so that screen and connection are removed at the same time. (See illustration.) This type of screen not only makes refilling easier, but also provides more efficient filtering and less chance of clogging.

On 608-C size and larger, an additional hexagon portion for wrench-hold is provided at outlet end which makes opening and refilling of these larger sizes extremely easy.

The Imperial Torpedo has no bolts to unscrew and no flanges, springs or loose screens to remove before refilling. There is a basket type screen at inlet end of dehydrator. Furnished filled with Silica Gel.

Made in sizes up to 7 H.P. Supplied in attractive bronze finish.

No. 603-C—For 1/5 to 1/3 H.P.

Furnished filled with Silica Gel.
Shell length 2¾"—overall length 4⅞".
Outside diameter of shell 1¾". Cubic Inches Silica Gel—5.
Complete with Flare Nuts and Copper Seal Caps.

No. 603-C ¼" Flare. List Price Each **$2.90**

No. 606-C—For 1/3 to 3/4 H.P.

Furnished filled with Silica Gel.
Shell length 5½"—overall length 8-$^{3}/_{16}$".
Outside diameter of shell 1¾". Cubic Inches Silica Gel—10.
Complete with Flare Nuts and Copper Seal Caps.

No. 606-C ¼" Flare. List Price Each **$4.25**
⅜" Flare. List Price Each **4.50**

No. 608-C—For ¾ to 1½ H.P.

Furnished filled with Silica Gel.
Shell length 7½"—overall length 10-$^{9}/_{16}$".
Outside diameter of shell 2". Cubic Inches of Silica Gel—20.
Complete with Flare Nuts and Copper Seal Caps.

No. 608-C ¼" Flare. List Price Each **$5.50**
⅜" Flare. List Price Each **5.75**

No. 612-C—For 1½ to 3 H.P.

Furnished filled with Silica Gel.
Shell length 12"—overall length 15-$^{1}/_{16}$".
Outside diameter of shell 2". Cubic Inches of Silica Gel—37.
Complete with Flare Nuts and Copper Seal Caps.

No. 612-C ¼" Flare. List Price Each **$9.00**
⅜" Flare. List Price Each **9.25**

No. 618-C—For 3 to 7 H.P.

Furnished filled with Silica Gel.
Shell length 18"—overall length 21-$^{1}/_{16}$".
Outside diameter of shell 2". Cubic Inches of Silica Gel—54.
Complete with Flare Nuts and Copper Seal Caps.

No. 618-C ⅜" Flare. List Price Each **$13.50**
½" Flare. List Price Each **14.00**

COPPER GASKET

for Torpedo Dehydrators

This gasket fits all Torpedo Dehydrators, Nos. 603-C, 606-C, 608-C, 612-C, and 618-C.

No. 37111 Copper Gasket. ¾" diameter.
List Price per 100 ..... **$5.00**

IMPERIAL *TORPEDO* FILTERS

Patent Applied For

The Most Formidable Weapon in the War on Scale and Dirt

The Imperial Torpedo Filter is made with the same streamline design as the Torpedo Dehydrator. The smooth, inside construction of this filter is one of its features because it eliminates the possibility of sediment traps within the filter itself.

The Torpedo design also adds to its efficiency as foreign substances are more equally distributed around the filtering element.

The refrigerant passes through two straining elements, a screen and a wool batt. These two elements assure thorough filtering out of scale, compressor chips and dirt. These filters cannot be opened.

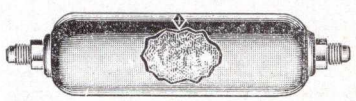
Furnished with lead protector caps on flare threads.

No. 643-C

Shell length 2¾" — overall length 4¾". Outside diameter of shell 1¾".

List Price Each

No. 643-C ¼" Flare x ¼" Flare **$3.00**
¼" Female Flare x ¼" Male Flare **3.25**
⅜" Flare x ⅜" Flare **3.55**

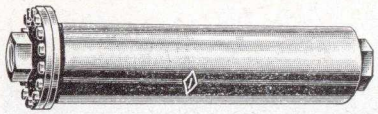


No. 646-C

Shell Length 5½"—overall length 7⅜".
Outside diameter of shell 1¾".

List Price Each

No. 646-C ¼" Flare x ¼" Flare **$5.50**
¼" Female Flare x ¼" Male Flare **5.75**
⅜" Flare x ⅜" Flare **6.05**

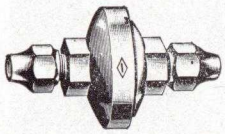


LARGE STEEL DEHYDRATORS

Large size dehydrator for air conditioning and refrigeration. Steel shell 4 in. diameter; 24" in length. Removable flange for refilling and cleaning. 1½ inch female iron pipe thread on each end. Screens and steel wool furnished but no drier.

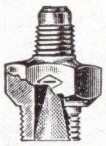
No. 524-C—Dehydrator with 24" shell. Overall length, 27 in. Capacity, 274 cu. in. Net weight, Approx., 12 lbs. List Price Each **$100.00**

No. 48-C FORGED BRASS LINE STRAINER



Large inside capacity for all tube scale, compressor chips, or dirt in oil. Layer of special felt between two 120 mesh brass screens. Body of heavy brass forgings, threaded and soft soldered so it can be taken apart. Strainers furnished with nuts.

Size	List Price With Nuts
¼" O.D. S.A.E. Flare	**$2.70**



No. 176-C

EVAPORATOR and FLOAT VALVE STRAINER

Insurance against clogged evaporators and floats. Furnished with 120 x 108 mesh brass screen.

No. 176-C ¼" O.D. Tube x ⅝"-18 Thread. List Price, Each **$1.04**

No. 37111

COPPER GASKET

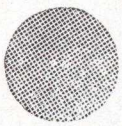
For Topedo Dehydrators

This gasket fits all Torpedo Dehydrators, Nos. 603-C, 606-C, 608-C, 612-C, and 618-C.

No. 37111 Copper Gasket. ¾" diameter. List Price, per 100 ..... **$5.00**

SCREENS, FELTS and LEAD GASKETS

These screens, felts and gaskets are the same as those used in Imperial No. 48-C Strainer and former Nos. 304-C to 312-C Dehydrators, former No. 55-C Dehydrators and former No. 113-C Dehydrator.



For No. 55-C Dehydrator

No. 26904—Felt $1\frac{3}{16}$"x$1\frac{3}{16}$". List Price, per 100..... **$5.10**
No. 26905—Screen $1\frac{3}{16}$". List Price, per 100..... **10.00**
No. 26903—Lead Gasket $1\frac{1}{16}$"x⅞". List Price, per 100 **12.30**

For No. 48-C Strainer and 113-C, 304-C, 306-C, 309-C and 312-C Dehydrators

No. 29980—Felt 1¾"x¼". List Price, per 100..... **$10.10**
No. 29979—Screen 1¾". List Price, per 100..... **20.25**
No. 32072—Lead Gasket 2"x1¾". List Price, per 100. **27.25**

IMPERIAL REFRIGERANT DRIER

SILICA GEL

This drier dehydrates by adsorption. It is chemically stable and will not react with refrigerants. 14 to 20 mesh. Furnished in sealed cans.

No. 258-C 1 lb. Can. Per Can **$1.05**
No. 259-C 5 lb. Can. Per Can **5.00**

IMPERIAL TORPEDO ACCUMULATORS

For use with hi-side float, or capillary tube systems.

The chief function of this accumulator is to hold an extra supply of refrigerant so that the exact amount of charge is less important. ⅜" Fem. I.P.T. inlet and outlet.

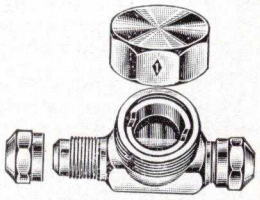
Outside diameter of shell 2".

Cat. No.	Shell Length	List Price Each
416-C	7½"	**$6.50**
417-C	12 "	**7.50**

IMPERIAL LIQUID INDICATOR

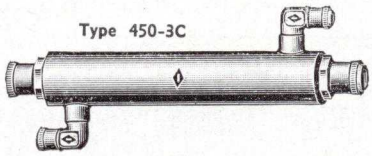
Has heavy glass in port hole, sealed against leakage with Neoprene gasket. The seal cap is an added precaution against leaks. Furnished with cap nuts.

No. 187-C ¼" Flare x ¼" Flare. List Price, Each **$3.00**
No. 187-CS ¼" O.D. Solder List Price, Each **4.00**



No. 187-C ⅜" Flare x ⅜" Flare. List Price, Each.... **3.00**
No. 187-CS ⅜" O.D. Solder. List Price, Each **4.00**

IMPERIAL CAPACITY BOOSTER (Heat-X-Changer) with Thermek Heat Transfer Surface



Thermek Surface

Designed to precool liquid refrigerant before it enters evaporator. Thermek Heat Transfer Surface gives higher heat transfer than any other type of heat exchanger. Used in place of "dryer" coils or when coil or compressor capacities are on edge and unable to take care of peak loads. Capacity booster raises back pressure of coil, increasing compressor efficiency; enables unit to utilize 100% of coil surface; reduces friction in tubing by preventing formation of flash gas; and prevents oil scrubbing caused by liquid refrigerant entering compressor. Results in lower operating cost, more machine capacity, and no frostbacks.

Place in liquid line just before expansion valve and in suction line just after evaporator so cold gas coming from evaporator precools warmer liquid refrigerant entering evaporator. Capacity equivalent to 100 ft. of suction and liquid line joined by soldering. Connections: 2 for liquid inlet and outlet; 2 for coil suction inlet and outlet. **No. 450-3C** (illustrated) a small, inexpensive unit for ice cream cabinets, beverage coolers, display cases and small units where space is a factor. **No. 451-3C** is similar to **No. 450-3C**, excepting both liquid connections are on same side of unit.

Cat. No.	Capacity of Cooling Unit B.T.U. Per Hr.	Overall Length or Height Inches	CONNECTIONS Inches Liquid	CONNECTIONS Inches Suction	List Price Each
450-3C or 451-3C	3,000	9⅜	¼ Flare	½ Flare	**$ 8.30**
450-4C	4,000	9	¼ Flare	½ Flare	**12.60**
450-6C	6,000	12	¼ Flare	⅝ Flare	**15.45**
450-12C	12,000	19	⅜ Flare	¾ Flare	**20.80**

IMPERIAL TRIPLE-SEAL FLARE FITTINGS

for Refrigeration and Air Conditioning

Pat. No. 2,267,416

The fitting that remains leak-proof even when the seat has been badly nicked or marred

The Imperial Triple-Seal Flare Fitting brings a new, extra protection against leakage to refrigeration fitting connection work.

This fitting is the same excellent SAE refrigeration type fitting you have previously used except that it has an important improvement. It is made with a groove in its seat as shown in the accompanying diagram. When the flare is drawn up against this groove the copper tubing is extruded into the groove making a self-seating joint. This joint will remain leak-proof even though the face of the seat may be badly nicked or marred.

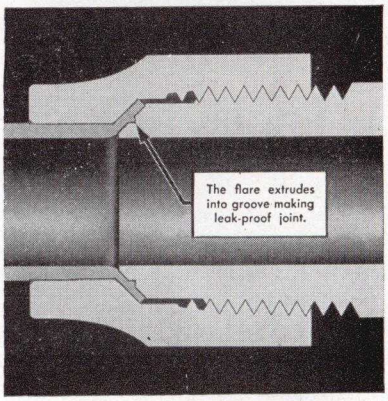
This provides an extra safety seal which is of the greatest importance in refrigeration work.

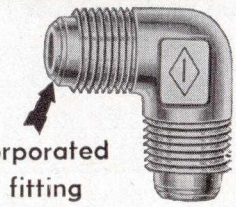
All Imperial refrigeration flare fittings are designed especially for this service. Nuts, tees, elbows and crosses are made from brass forgings. This assures a fine grain structure, freedom from internal stress, and a high tensile strength. It eliminates any possibility of seepage of refrigerants or of cracking or splitting.

Female couplings and cap nuts are made from extruded bronze rod which because of its higher copper content is not subject to season cracking.

Flats are placed on elbows and tees. This gives a wrench hold, eliminating the possibility of distorting the body in gripping the fitting, and also speeds up work materially.

Imperial fittings are put up in 2 color boxes in standard package quantities.

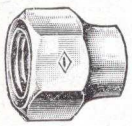




Groove incorporated in seat of fitting

NO. 641-F NUT

Made from Brass Forging



Outside Diameter of Tube	List Price Per 100	Outside Diameter of Tube	List Price Per 100
3/16"	$21.00	7/16"	$32.00
1/4"	21.00	1/2"	32.00
5/16"	22.00	5/8"	50.00
3/8"	26.00	3/4"	80.00

NO. 641-FS SHORT NUT

Made from Brass Forging

Outside Diameter of Tube	List Price Per 100	Outside Diameter of Tube	List Price Per 100
3/16"	$20.00	7/16"	$30.00
1/4"	20.00	1/2"	30.00
5/16"	21.00	5/8"	48.00
3/8"	25.00	3/4"	76.00

NO. 641-FP FROST PROOF NUT

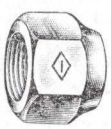
Made from Brass Forging

Has annulus around tube, pierced by a series of holes which allow ice to expand without squeezing tube.

3/16"	$ 35.00	7/16"	$ 55.00
1/4"	35.00	1/2"	55.00
5/16"	38.00	5/8"	72.00
3/8"	45.00	3/4"	110.00

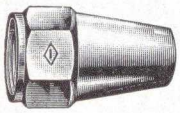
NO. 662-FS SHORT REDUCING NUT

Made from Brass Forging



Size	List Price Per 100	Size	List Price Per 100
1/4" x 3/16"	$28.00	1/2" x 3/8"	$38.00
5/16" x 1/4"	29.00	5/8" x 1/2"	56.00
3/8" x 1/4"	27.50	3/4" x 5/8"	84.00

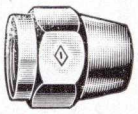
NO. 41-F NUT



Made from extruded rod. For use on water lines.

O.D. of Tube	List Price Per 100	O.D. of Tube	List Price Per 100
3/16"	$11.50	7/16"	$ 51.00
1/4"	14.00	1/2"	51.00
5/16"	18.50	5/8"	99.00
3/8"	30.00	3/4"	127.00

NO. 41-FS SHORT NUT



Made from extruded rod. For use on water lines.

O.D. of Tube	List Price Per 100	O.D. of Tube	List Price Per 100
3/16"	$10.50	7/16"	$ 38.00
1/4"	12.50	1/2"	38.00
5/16"	16.00	5/8"	81.00
3/8"	26.00	3/4"	104.00

No. 639-F FLARED TUBE SEALING PLUG

Outside Diameter of Tube	List Price Per 100	Outside Diameter of Tube	List Price Per 100
1/4"	$14.00	5/8"	$ 58.00
3/8"	23.00	3/4"	110.00
1/2"	35.00		

NO. 640-FB FLARED TUBE CAP NUT

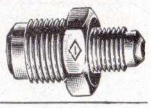
Made from Extruded Bronze Rod to eliminate season cracking. Furnished with one gasket.

O.D. of Tube	List Price Per 100	O.D. of Tube	List Price Per 100
1/4"	$13.00	5/8"	$ 53.00
3/8"	23.50	3/4"	88.00
1/2"	35.00		

NO. 642-F UNION

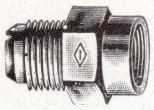
O.D. of Tube	List Price Per 100	O.D. of Tube	List Price Per 100
1/4"	$ 23.00	1/2"	$ 53.00
5/16"	30.00	5/8"	87.00
3/8"	39.00	3/4"	150.00

No. 656-F FLARED REDUCING UNION



Outside Diam. of Tube	List Price Per 100	Outside Diam. of Tube	List Price Per 100
3/8" to 1/4"	$ 58.00	5/8" to 1/2"	$106.00
1/2" to 1/4"	71.00	3/4" to 1/2"	168.00
1/2" to 3/8"	71.00	3/4" to 5/8"	168.00
5/8" to 3/8"	106.00		

No. 646-F FEMALE COUPLING

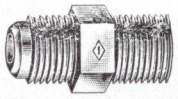


Flare to Female Pipe

Made from Extruded Bronze Rod to eliminate season cracking

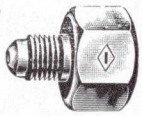
Outside Diam. of Tube	Iron Pipe Thread	List Price Per 100	Outside Diam. of Tube	Iron Pipe Thread	List Price Per 100
1/4"	1/8"	$23.00	1/2"	3/8"	$ 58.00
1/4"	1/4"	39.00	1/2"	1/2"	124.00
3/8"	1/4"	39.00	5/8"	1/2"	115.00
3/8"	3/8"	67.00	5/8"	3/4"	253.00

NO. 648-F HALF UNION



O.D. of Tube	Iron Pipe Thread	List Price Per 100	O.D. of Tube	Iron Pipe Thread	List Price Per 100
1/4"	1/8"	$18.50	1/2"	3/8"	$ 41.00
1/4"	1/4"	23.00	1/2"	1/2"	51.00
1/4"	3/8"	41.00	5/8"	1/4"	81.00
3/8"	1/8"	39.00	5/8"	3/8"	81.00
3/8"	1/4"	30.00	5/8"	1/2"	71.00
3/8"	3/8"	41.00	5/8"	3/4"	138.00
3/8"	1/2"	58.00	3/4"	1/2"	138.00
1/2"	1/4"	51.00	3/4"	3/4"	138.00

No. 661-F MALE FLARE TO FEMALE FLARE REDUCER



Furnished with one Gasket

Made from Extruded Bronze Rod to eliminate season cracking

O.D. of Tube Male End	O.D. of Tube Female End	List Price Per 100	O.D. of Tube Male End	O.D. of Tube Female End	List Price Per 100
1/4"	to 5/16"	$ 69.00	1/2"	to 1/4"	$ 60.00
1/4"	to 3/8"	81.00	1/2"	to 3/8"	81.00
1/4"	to 1/2"	101.00	1/2"	to 5/8"	143.00
5/16"	to 1/4"	60.00	5/8"	to 1/2"	101.00
3/8"	to 1/4"	60.00	5/8"	to 3/4"	253.00
3/8"	to 5/16"	69.00	3/4"	to 5/8"	143.00
3/8"	to 1/2"	101.00			

No. 649-F ELBOW

Made from Brass Forging

Outside Diameter of Tube	Iron Pipe Thread	List Price Per 100	Outside Diameter of Tube	Iron Pipe Thread	List Price Per 100
1/4"	1/8"	$ 29.00	1/2"	1/4"	$ 74.00
1/4"	1/4"	41.00	1/2"	3/8"	64.00
1/4"	3/8"	64.00	1/2"	1/2"	106.00
3/8"	1/8"	51.00	5/8"	1/2"	97.00
3/8"	1/4"	41.00	5/8"	3/4"	196.00
3/8"	3/8"	64.00	3/4"	1/2"	196.00
3/8"	1/2"	106.00	3/4"	3/4"	196.00

No. 650-F ELBOW

Made from Brass Forging

Outside Diameter of Tube	Iron Pipe Thread	List Price Per 100	Outside Diameter of Tube	Iron Pipe Thread	List Price Per 100
1/4"	1/8"	$44.00	1/2"	3/8"	$ 92.00
1/4"	1/4"	58.00	1/2"	1/2"	207.00
3/8"	1/4"	58.00	5/8"	1/2"	230.00
3/8"	3/8"	92.00			

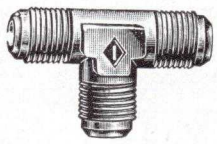
No. 655-F ELBOW

Made from Brass Forging

Outside Diam. of Tube	List Price Per 100	Outside Diameter of Tube	List Price Per 100
1/4"	$ 41.00	5/8"	115.00
3/8"	58.00	3/4"	207.00
1/2"	81.00		

No. 644-F TEE

Made from Brass Forging

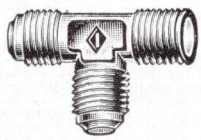


Outside Diameter of Tube	List Price Per 100	Outside Diameter of Tube	List Price Per 100
1/4"	53.00	5/8"	150.00
3/8"	69.00	3/4"	299.00
1/2"	97.00		

No. 645-F TEE

Made from Brass Forging

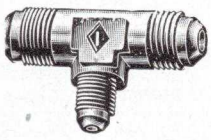
Outside Diameter of Tube	Iron Pipe Thread	List Price Per 100	Outside Diameter of Tube	Iron Pipe Thread	List Price Per 100
3/16"	1/8"	$ 51.00	7/16"	1/4"	$113.00
1/4"	1/8"	51.00	1/2"	3/8"	94.00
1/4"	1/4"	85.00	1/2"	1/2"	156.00
3/8"	1/4"	67.00	5/8"	1/2"	147.00



No. 651-F TEE

Made from Brass Forging

Outside Diameter of Tube	Iron Pipe Thread	List Price Per 100	Outside Diameter of Tube	Iron Pipe Thread	List Price Per 100
1/4"	1/8"	$51.00	1/2"	3/8"	$ 94.00
1/4"	1/4"	85.00	1/2"	1/2"	156.00
3/8"	1/4"	67.00	5/8"	1/2"	147.00
3/8"	3/8"	113.00			



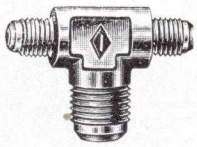
No. 659-F TEE

Made from Brass Forging

O.D. of Tube	List Price Per 100	O.D. of Tube	List Price Per 100
3/8"x3/8"x1/4"	$ 97.00	1/2"x1/2"x3/8"	$124.00
1/2"x1/2"x1/4"	124.00	5/8"x5/8"x1/2"	177.00

No. 684-F TEE

Made from Brass Forging

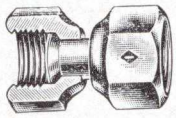


O.D. of Tube	List Price Per 100
1/4"x1/4"x3/8"	$ 97.00
3/8"x3/8"x1/2"	124.00
1/2"x1/2"x5/8"	177.00

MANIFOLD UNION COUPLING

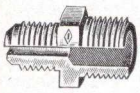
No. 670-F Manifold Union Coupling can be used to couple three-way line valves together and eliminate the use of manifold bars. It is possible to couple any number of valves in a row.

One or more units in the system may be shut off without interfering with the remaining units.



		List Price Each
No. 670-F	¼" O.D. S.A.E.	$0.86
	⅜" O.D. S.A.E.	.98
	½" O.D. S.A.E.	1.09
	⅝" O.D. S.A.E.	1.45

FUSIBLE HALF UNION



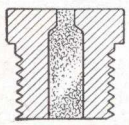
250° Fusible Metal

Relieves high pressure caused by excessive heat. Furnished with Fusible Metal to melt at approximately 250°F. Attached in the high side and vented to the atmosphere.

		List Per 100
No. 248-F	¼" Flared Tube x ¼" Male I.P.T.	$56.00
No. 248-F	¼" Flared Tube x ⅜" Male I.P.T.	78.00
No. 248-F	⅜" Flared Tube x ⅜" Male I.P.T.	80.00

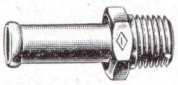
No. 621-F FUSIBLE PLUG

These safety plugs will relieve high pressures caused by excessive heat. Furnished with Fusible Metal to melt at approximately 165°F. or 250°F. Unless otherwise specified 165°F. type will be furnished. All sizes are tapered iron pipe thread.



		List Per 100
No. 621-F	⅛" Iron Pipe Thread	$40.00
No. 621-F	¼" Iron Pipe Thread	50.00
No. 621-F	⅜" Iron Pipe Thread	70.00

No. 90-C HOSE CONNECTOR



Hose Size Inside Diam.	Iron Pipe Thread	List Price Per 100
¼"	⅛"	$ 66.00
⅜"	¼"	76.00
⅜"	⅜"	83.00
½"	⅜"	83.00
⅝"	½"	198.00

No. 64-C FLARED TUBE COPPER SEAL CAP
No. 625-F COPPER FLARE GASKET

No. 64-C

No. 625-F

LIST PER 100

Size	64-C	625-F	Size	64-C	625-F
¼"	$4.00	$4.00	⅝"	$11.50	$10.00
⅜"	7.00	6.00	¾"	18.50	14.00
½"	9.00	8.00			

CYLINDER ADAPTERS

Machined on one end to fit large refrigerant cylinders. They are used when filling small service tanks. Furnished with a fibre gasket to give a tight non-leaking coupling.

		List Each
215-C	½" Straight Female I.P.T. x ¼" S.A.E.	$1.20
215-C	¾" Straight Female I.P.T. x ¼" S.A.E.	1.20
215-C	¾" Straight Female I.P.T. x ⅜" S.A.E.	1.65
33730	Gasket for ½" Female I.P.T.	.03
33265	Gasket for ¾" Female I.P.T.	.03

No. 26994—PURGE PLUG

For use on Compressor Valves.

Has $\frac{9}{16}$" hex.—⅛" I.P.T.

List Price Per 100 ..... $19.50

No. 626-F LEAD PROTECTOR CAP

To cover threads and seats of valves, and protect them from being scratched or defaced. Size of each cap plainly stamped on outside

No. 626-F—Per 100			
¼"	$4.50	½"	$ 9.50
$\frac{5}{16}$"	6.00	⅝"	11.50
⅜"	9.00	½" I.P.T.	10.50

IMPERIAL BRASS PIPE FITTINGS
All prices are per 100 fittings

The Brass Pipe Fittings listed below are for use on water and air lines.

NO. 100-B ELBOW

⅛"	$21.40
¼"	30.40
⅜"	60.80
½"	96.80

NO. 101-B TEE

⅛"	$30.40
¼"	41.60
⅜"	67.50
½"	123.80

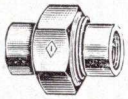
NO. 102-B CROSS

⅛"	$47.30
¼"	57.40
⅜"	86.60
½"	132.80

NO. 103-B COUPLING

⅛"	$19.10
¼"	32.60
⅜"	48.40
½"	85.50

NO. 104-B UNION



⅛"	$82.10
¼"	115.90
⅜"	165.00
½"	172.10

No. 110-B BUSHING

Male Thrd.	Fem. Thrd.	
¼"	⅛"	$15.80
⅜"	¼"	22.50
⅜"	⅛"	22.50
½"	⅜"	33.80
½"	¼"	33.80
½"	⅛"	33.80
¾"	½"	60.00
¾"	⅜"	60.00
1 "	¾"	80.00

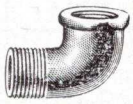
NO. 112-B CLOSE NIPPLE

⅛"	$14.60
¼"	20.30
⅜"	33.80
½"	48.40

NO. 113-B NIPPLE

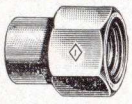
I.P.T.	Lgth.		I.P.T.	Lgth.	
⅛"	1½"	$20.30	⅛"	2½"	$28.10
¼"	1½"	27.00	¼"	2½"	37.10
⅜"	1½"	36.00	⅜"	2½"	47.30
½"	1½"	56.30	½"	2½"	69.80
⅛"	2 "	24.80	⅛"	3 "	30.40
¼"	2 "	32.60	¼"	3 "	40.50
⅜"	2 "	43.90	⅜"	3 "	56.30
½"	2 "	61.90	½"	3 "	76.50

NO. 116-B STREET ELBOW



⅛"	$23.60
¼"	32.60
⅜"	54.00
½"	73.10

No. 119-B Reducing Coupling



Fem. Thrd.		
¼"	⅛"	$25.90
⅜"	¼"	38.30
½"	⅜"	49.50

NO. 120-B ADAPTER

Fem. Thrd.	Male Thrd.	
⅛"	⅛"	$23.60
¼"	⅛"	25.90
⅜"	¼"	38.30
½"	⅜"	49.50

NO. 121-B PLUG

⅛"	$14.60
¼"	18.00
⅜"	24.80
½"	37.10
¾"	92.50

NO. 122-B HEX. NIPPLE

⅛" x ⅛"	$16.90
¼" x ¼"	22.50
⅜" x ⅜"	28.10
½" x ½"	33.70

NO. 123-B REDUCING NIPPLE

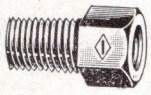
¼" x ⅛"	$25.90
⅜" x ¼"	38.30

NO. 124-B 45° STREET ELBOW

⅛"	$24.55
¼"	35.80
⅜"	53.20
½"	65.40

No. 130-B ADAPTER

Has Extra Long Male Pipe Thread



⅛"x⅛"	$31.00
¼"x¼"	33.00
⅜"x⅜"	44.00
½"x½"	54.00

IMPERIAL REFRIGERATION SERVICE TOOLS

Imperial tools are widely and successfully used by engineers, installation and service men engaged in all types of refrigeration and air conditioning work. They are better tools which consistently deliver trouble-free work and provide enduring service.

The Imperial line of tools is kept up to the minute by constant research and development work.

The line includes tube working tools; equipment for charging, purging and testing; wheel puller; soldering and brazing equipment; Halide leak detectors and allied items.

IMPERIAL DE LUXE TUBE CUTTER

Pat. Nos. D-99,190, 2,065,138

Will quickly cut copper, brass, aluminum, block tin, Bundy steel or lead tubing. Tubing rests against two rollers, making operation easy. Makes a clean, right angle cut, leaving no chips or burrs to clog the line, and does not flatten the tube.

An outstanding feature of this tube cutter is the vertical groove in the two rollers. If it is necessary to remove a cracked flare, the tubing can be cut right at the bottom of the flare without wasting any tubing.

Has high strength, light weight body with polished finish.

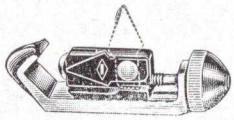
Convenient reamer attached.

No. 174-F For 1/8" to 3/4" O.D. Tubing. Each **$2.75**
No. 212-F For 1/8" to 1 1/8" O.D. Tubing. Each **3.25**

IMPERIAL JUNIOR TUBE CUTTER

Pat. No. 2,126,951

An improved, streamlined small size tube cutter for use in close places. Occupies little space in tool box. Cuts copper, brass, aluminum, block tin, lead or Bundy steel tubing. Makes a quick, clean, right angle cut.



Reamer is attached and folds down out of way when not in use. Adjustment handle is knurled for easy grip.

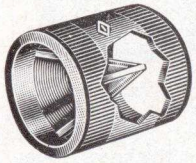
No. 127-F for 1/8" to 3/4" O. D. tubing.
Price each **$1.25**

EXTRA PARTS FOR IMPERIAL TUBE CUTTERS

No. 32633 Cutting Wheel for Nos. 94-F, 104-F, 127-F, 174-F and 212-F. Each **$0.25**
No. 33045 Cutting Wheel for No. 204-F. Each .... **.35**
No. 26883 Screw for Cutting Wheel for Nos. 174-F, 212-F, 94-F, 104-F, 127-F. Each ..... **.06**
No. 33046 Screw for Cutting Wheel for No. 204-F. Each ..... **.06**
No. 97-F Reamer Blade for Nos. 174-F, 212-F, 94-F. Each ..... **.25**
No. 31296 Screw for Reamer Blade for Nos. 174-F, 212-F, 94-F. Each ..... **.03**

IMPERIAL INNER AND OUTER REAMER

Pat. No. 2,242,821



With this convenient tool you can ream both inside and outside edges of copper, brass or aluminum tubing. Handles all sizes of tubing from 3/16" O.D. to 1 1/2" O.D.

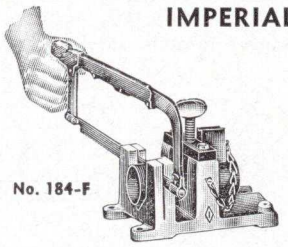
Tubing is introduced from one end of tool for inside reaming, and from the other end for outside reaming. Tool cuts in either direction and is self centering so that an evenly balanced job is turned out.

Tool has 3 hardened, hollow ground, tool steel cutters which will give exceptionally long service. Cutters are protected against damage, when not in use, by outside shell of tool.

Body is knurled for easy handling.

No. 208-F Inner and Outer Reamer. Each **$1.20**

IMPERIAL-BEAVER SAWING VISES

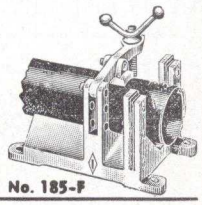


No. 184-F

For making perfect right-angle cuts on hard or soft pipe and tubing. Required in making joints with solder fittings. Constructed of malleable iron. Used with standard hacksaw. Will not mar or crush tubing. Removable steel inserts.

No. 184-F For 3/16" to 2 3/8" tubing
Each **$6.50**

No. 185-F For 1 1/2" to 4" tubing
Each **$15.00**

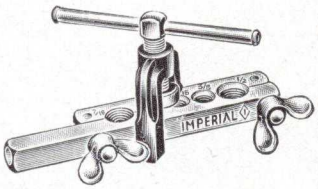


No. 185-F

IMPERIAL FLARING TOOL

With Slip-On Yoke

Pat. Nos. 1,724,697, 1,661,367, 2,072,359
Other Patents Pending



This new Imperial Flaring Tool provides ease and speed of operation never before attained in a flaring tool.

The yoke is made so that it can be slipped on over the bar without twisting or turning. The inside edges of the yoke are slotted so that once in position a slight turn holds it in place on the bar.

An additional advantage of this tool is the construction of the bottom of the yoke, which permits flares to be made where there is little space between nut and the end of tubing. Fin tubing sometimes offers this problem.

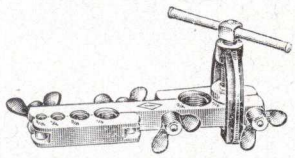
Flares soft copper, brass or aluminum tubing. Yokes are made of forged steel. No. 195-F type is furnished either with cone which rotates with the screw or with swivel cone. The latter type remains stationary while screw is turned.

No. 193-F Imperial Flaring Tool, flares 3/16", 1/4", 5/16", 3/8", 7/16" and 1/2" O.D. tubing. Price each **$3.25**
No. 195-F Imperial Flaring Tool, flares 1/4", 5/16", 3/8", 1/2" and 5/8" O.D. tubing. Price each **4.25**
No. 195-FS Same as 195-F, except with swivel cone. Price each **$4.50**
No. 36273 Yoke Assembly for 193-F and 195-F. Price each **1.40**
No. 37369 Yoke Assembly for 195-FS and former 193-FS. Price each **1.65**
No. 36277 Bar only for 193-F. Price each **2.00**
No. 36279 Bar only for 195-F. Price each **3.00**
No. 25384 Compressor Cone only for Nos. 193-F and 195-F. Price each ..... **.25**
No. 32532 Compressor Cone only for No. 195-FS and former 193-FS. Price each ..... **.25**

IMPERIAL FLARING TOOL

(Wide Range Type.)

Pat. Nos. 1,724,697, 1,661,367, 2,072,359



This tool handles an exceptionally wide range of tubing sizes. Makes it easy to flare either large or small diameter tubing without cracking or splitting tubing.

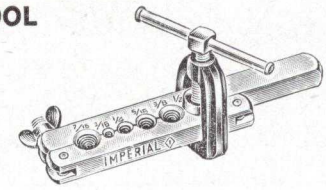
With it proper flares can be made to prevent leakage when making up joints with S.A.E. flared fittings. Yoke is self-centering and spreader cone is on a swivel and remains stationary when flaring.

Flares soft copper, brass or aluminum tubing. For 3/16", 1/4", 3/8", 1/2", 5/8" and 3/4" O.D. tubing.

No. 175-F Imperial Flaring Tool. Each **$4.85**
No. 32638 Yoke Assembly for 175-F. Each **1.95**
No. 32641 Bar only for 175-F. Each **3.25**

IMPERIAL FLARING TOOL

Pat. Nos. 1,724,697, 1,661, 367
2,072,359



Flares soft copper, brass or aluminum tubing to make S. A. E. joints without cracking or splitting tubing. Perfect flares prevent leakage and can be made in less than thirty seconds. Yoke is self centering. Yokes for Nos. 93-F, 95-F and 95-FS are made of steel forging.

No. 95-F type is furnished either with cone which rotates with the screw or with swivel cone. The latter remains stationary while screw is turned.

No. 93-F for $\frac{3}{16}$", ¼", $\frac{5}{16}$", ⅜", $\frac{7}{16}$", and ½" O.D. tubing. Each **$3.00**

No. 95-F for ¼", $\frac{5}{16}$", ⅜", ½", and ⅝" O.D. tubing. Each **4.00**

No. 95-FS Same as above, except with swivel cone. Each **4.25**

No. 103-F for ¾", ⅞", and 1" O.D. tubing. Each **5.00**

EXTRA PARTS

No. 33465 Yoke Assembly for 93-F. Each **$1.25**

No. 33465 Yoke Assembly for 95-F. Each **1.25**

No. 38379 Yoke Assembly for 95-FS. and former 93-FS. Each **1.50**

No. 28368 Yoke Assembly for 103-F. Each **2.25**

No. 25384 Compressor Cone only for 93-F, 95-F. Each. **.25**

No. 32532 Compressor Cone only for 95-FS and former 93-FS. Each ..... **.25**

No. 28366 Compressor Cone for 103-F. Each ..... **.90**

No. 30077 Bar only for 93-F and former 93-FS. Each **1.90**

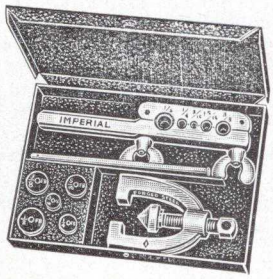
No. 30231 Bar only for 95-F. Each **2.95**

No. 28360 Bar only for 103-F. Each **3.00**

No. 24461 Wing Nut. Each ..... **.15**

IMPERIAL Multi-Size "DOUBLE-FLARING" TOOL

For Thin-Wall Soft Steel, Soft Copper and Aluminum Tubing.



This tool provides a new, simplified method of making 45° double flares on $\frac{3}{16}$", ¼", $\frac{5}{16}$", ⅜" and ½" O. D. thin-wall soft steel tubing (such as Bundy). Can be used also for making single or double flares on soft copper or aluminum tubing.

The tendency of welded and brazed steel tubing to crack when flared with the ordinary single-flaring tool is overcome by this tool because it folds back the end of the tube to make a flare with double thick, double strength walls.

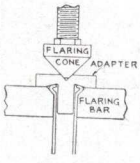


Fig. 1

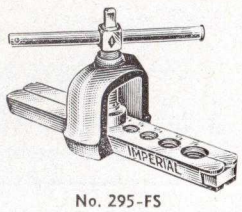
Fig. 2

The double flare also offers special advantages for copper and aluminum tubing when joints are to be reconnected frequently, as for example on dehydrators.

Tool is small—convenient to work with—can be used right on the job. No hammering required. Tool first bells tubing, using adapter as shown in Fig. 1, then completes flare in same manner as a conventional flaring tool, Fig. 2.

No. 93-FB for $\frac{3}{16}$", ¼", $\frac{5}{16}$", ⅜" and ½" O. D. tubing. Complete in metal kit. Price each **$7.00**

IMPERIAL SELF-CLAMPING FLARING TOOL



No. 295-FS

This new flaring tool for flaring soft copper, brass and aluminum tubing has an outstanding self-clamping feature which makes it easier and faster to operate. To clamp tubing, it is only necessary to spread bar at its free end and place tubing in proper opening, close bar and slide forged steel yoke onto it. (See Fig. 1) Bar is beveled on two outside edges, and yoke is tapered on each side to match. The tapered yoke automatically clamps bar to hold tubing in place—there are no nuts or other devices to be tightened. (See Fig. 2.)

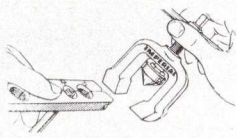
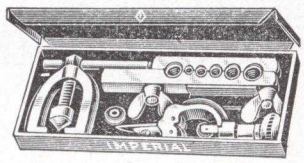


Fig. 1

Rod handle on yoke can be removed and a ratchet wrench used when working in close quarters. Tool has swivel type flaring cone which makes operation easier especially when working with larger sizes of tubing.

Fig. 2

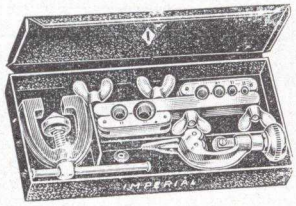
No. 295-FS Self-Clamping Flaring Tool for ¼", $\frac{5}{16}$", ⅜", ½", and ⅝" O.D. Tubing. Price each **$4.50**
No. 37677 Yoke Assembly for 295-FS. Each **1.75**
No. 32532 Compressor Cone only for 295-FS. Each.... **.25**
No. 37688 Bar Only for 295-FS. Each **3.00**



IMPERIAL FLARING AND CUTTING TOOL KITS

Kit has necessary tools for a quick cutting and flaring job on copper, brass and aluminum tubing. Extra cutting wheel included. Tools packed in steel box.

Cat. No. of Kit	With Flaring Tool No.	With Tube Cutter No.	Price Each
225-F	93-F	174-F	**$6.00**
1225-F	193-F	174-F	**6.25**
226-F	95-F	174-F	**7.00**
1226-F	195-F	174-F	**7.25**



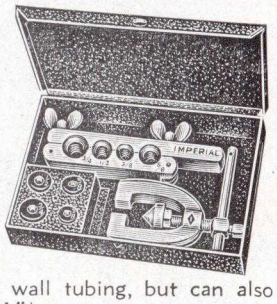
IMPERIAL FLARING AND CUTTING TOOL KIT

An exceptionally efficient kit for cutting and flaring copper, brass and aluminum tubing. Includes extra cutting wheel. Furnished in steel kit.

Cat. No. of Kit	No. of Flaring Tool Included	No. of Tube Cutter Included	Price Each
131-F	175-F	174-F	**$7.85**

IMPERIAL "DOUBLE-FLARING" TOOL for PLASTIC TUBING

Patent Nos. 1,724,697, 1,813,971, 2,072,359, 2,242,831.
Other Patents Pending



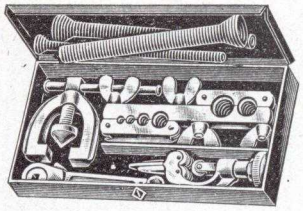
This tool was developed specifically for plastic tubing and makes double thickness flares which give much stronger joints. Flares ⅜", ½", ⅝" and ¾" O.D. plastic tubing. (Designed especially for .062" wall tubing, but can also be used for lighter wall such as .031")

Tool first bells the tubing, then folds back the ends to make a flare with double thick walls. Double thickness flares retain their shape better and have far greater resistance to pull-out than single flares. Also protect against squeezing flare wall too thin.

Tool is small, convenient to work with right on the job. Consists of flaring bar, yoke and 4 adapters.

No. 175-FP Double Flaring Tool for ⅜", ½", ⅝", and ¾" Plastic Tubing. Complete in Metal Kit. Each **$7.00**

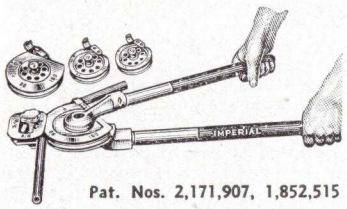
IMPERIAL TUBING TOOL KIT



A handy kit containing the necessary tools to quickly and accurately cut, flare and bend copper, brass and aluminum tubing. Includes No. 123-C Ratchet Wrench; No. 102-F Spring Tube Benders for 1/4", 3/8" and 1/2" O.D. tubing; No. 175-F Wide Range Flaring Tool; No. 174-F DeLuxe Tube Cutter; and extra cutting wheel for No. 174-F. Furnished in steel kit.

Cat. No. of Kit	No. of Flaring Tool Included	No. of Tube Cutter Included	No. of Ratchet Wrench Included	Price Each
133-F	175-F	174-F	123-C	**$9.80**

IMPERIAL HEAVY-DUTY TUBE-BENDING TOOL

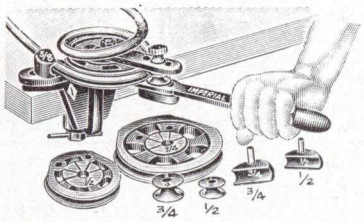


Pat. Nos. 2,171,907, 1,852,515

This easy operating tube bender is used for 3/8", 1/2", 5/8" and 3/4" O.D. copper, brass or aluminum tubing by simply changing the mandrel and adjusting the block. Long leverage and adjustable operating lever make it possible to apply considerable force without effort, avoiding sudden strains which injure tubing. Bender is marked showing 90° and 180° positions. For right or left hand bends. Removable handles. Packed in steel chest.

No. 360-F Imperial Heavy-Duty Tube Bending Tool. Each **$32.50**

MULTI-SIZE COMBINATION COIL MAKER AND TUBE BENDER



This tool is suitable for production or service work.

Will not only bend tubing to any angle but also can be used for making round or obround coils. Makes right or left hand bends or coils.

One tool, complete with attachments, will handle 3 sizes of soft copper, brass or aluminum tubing—1/2", 5/8" and 3/4" O.D. —in .020 to .065" wall thickness. Or tool can be bought for one size only and attachments added as desired.

Tool clamps on bench and gives exceptionally good leverage, making bending extremely easy. Tubing will not get out of round. Bending form calibrated to show 45°, 90°, 135° and 180° positions.

Tool is adapted for different sizes of tubing simply by changing mandrel, roller and clamp.

Bends and coils formed have the following dimensions:

Tube Size	Radius to Ctr. of Tube	Diameter of Coil
1/2"	1 7/8"	3 3/4"
5/8"	2 3/4"	5 1/2"
3/4"	3 3/16"	6 3/8"

Complete Tools

No. 474-F For 1/2", 5/8" and 3/4" O.D. tubing*. Each .. **$26.00**
No. 475-F For 1/2" O.D. tubing* only. Price each **14.25**
No. 476-F For 5/8" O.D. tubing only. Price each **15.50**
No. 477-F For 3/4" O.D. tubing only. Price each **17.00**

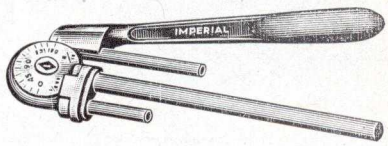
Attachments Only

Each unit consists of mandrel, roller and clamp for adapting tool to additional sizes:

No. 478-F For 1/2" O.D. tubing. Price per Unit **$5.00**
No. 479-F For 5/8" O.D. tubing. Price per Unit **6.00**
No. 480-F For 3/4" O.D. tubing. Price per Unit **7.00**

*Tool can be used with 1/2" attachments for bending 3/8" tubing if necessary.

IMPERIAL HAND TUBE BENDER



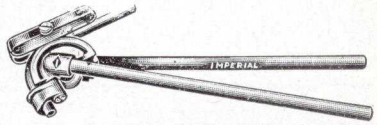
A one piece, open side bender; can be used to make bends at end or any part of tubing. Especially handy where tubing has been partially connected. Available in sizes from 3/16" O.D. to 3/8" O.D. Bends to any angle up to 180°. Form is calibrated to show degree positions so that duplicate bends may be made at any angle.

Constructed of steel; light in weight; extremely rugged and durable.

Cat. No.	O.D. of Tubing	Radius to Ctr. of Tube	Price Each
364-F	*3/16"	7/16"	**$5.25**
364-F	1/4"	9/16"	**5.25**
364-F	5/16"	11/16"	**5.60**
364-F	3/8"	13/16"	**6.00**

*3/16" Bender may also be used for 1/8" O.D. tubing.

IMPERIAL HAND TUBE BENDER



Similar in operation and construction to No. 364-F shown above. Not calibrated to show degree positions. For 1/2", 5/8" and 3/4" O.D. tubing.

Cat. No.	O.D. of Tubing	Radius to Ctr. of Tube	Price Each
364-F	1/2"	1 1/2"	**$ 9.25**
364-F	5/8"	2 "	**17.50**
364-F	3/4"	2 1/2"	**23.65**

IMPERIAL SPRING-TYPE TUBE BENDER

Makes it a simple matter to bend tubing by hand without collapsing the tube.

Consists of specially prepared spring wire coil. Attractive black protective finish. Overall length of 1/4", 5/16", 3/8" benders is 10". 7/16", 1/2" and 5/8" benders 12" overall.

No. 101-F Set of six benders. Price per set **$2.05**
No. 163-F Set of four benders, 1/4", 3/8", 1/2" and 5/8". Price per set **$1.45**

No. 102-F—1/4"	**$0.25**	7/16"	**.40**
5/16"	**.30**	1/2"	**.45**
3/8"	**.35**	5/8"	**.50**

IMPERIAL PINCH-OFF TOOLS

with Re-Rounding Holes

No. 105-F

For temporarily closing copper, brass, aluminum and soft steel tubing while making repairs. Tool also opens and rounds the tubing back into shape.

The No. 105-F is furnished with hex nuts and the No. 105-FF, which meets Navy Department specifications, is furnished with wing nuts.

No. 105-FF

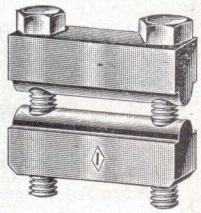
No. 105-F Pinch-Off Tool for 1/4", 3/8" and 1/2" O.D. Tubing. Each **$1.25**

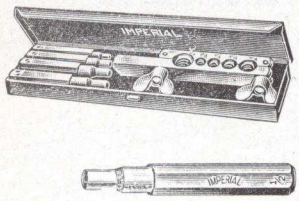
No. 105-FF Pinch-Off Tool for 1/4", 5/16", 3/8" and 1/2" O.D. Tubing **1.75**

IMPERIAL PINCH-OFF TOOL

Furnished to pinch tubing up to and including 1/2" outside diameter.

No. 146-F Pinch-Off Tools, List Price, each **$0.50**



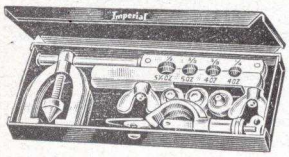


IMPERIAL SWEDGING TOOLS

(Patented)

For joining two pieces of tubing without using a coupling. One piece is fitted into the enlarged end of the other, then both are soldered together.

No. 195-S Tool Kit Includes flaring bar and 4 swedging tools for 1/4", 3/8", 1/2", and 5/8" O.D. Tube—Complete in steel case, Each **$6.10**
No. 193-S Swedging Tool Set for 1/4", 3/8", 1/2", and 5/8" O.D. tubing. Does not include flaring tool bar or steel case. Price per set **$3.15**
No. 93-S Tool for 1/4" Tube, Each ..... **.65**
No. 93-S Tool for 5/16" Tube, Each ..... **.70**
No. 93-S Tool for 3/8" Tube, Each ..... **.75**
No. 93-S Tool for 1/2" Tube, Each ..... **.90**
No. 93-S Tool for 5/8" Tube, Each **1.00**
No. 93-S Tool for 3/4" Tube, Each **1.05**
No. 30231 Flaring Tool Bar only. Each **2.95**



BLOCK TIN FLARING KIT

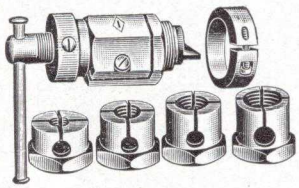
Contains tools to quickly cut and flare block tin pipe. Will cut 1/8" to 3/4" O.D. tin pipe, copper, brass or lead tubing.

Flaring tool gives the proper 90° flare without cracking or splitting the pipe. Flares 1/4" I.D. 4 oz.; 3/8" I.D. 4 oz.; 3/8" I.D. 5 oz., and 1/2" I.D. 5 1/2 oz. block tin pipe.

Packed in black lacquered steel case.

No. MB-85 Block Tin Flaring Kit complete. Price, each . **$6.50**
No. MB-86 Block Tin Flaring Tool only. Price, each ... **4.25**
No. MB-94-F Cutting Tool only. Price, each **2.25**

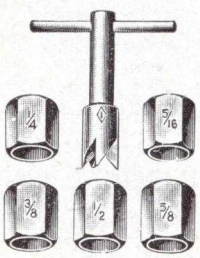
IMPERIAL RETHREADING AND REFACING TOOL



Quickly reconditions damaged or over-sized male S.A.E. threads on fittings or valves and refaces marred or scratched seats. Single cutter with adjustable feed; will not chatter. Clamps directly on threads, assuring seat that will be concentric with threads. Complete with collar to hold dies.

No. 203-F Rethreading and Refacing Tool, complete with 1/4" die, Each **$7.85**
No. 198-F Tool only, Each **6.85**
No. 200-F Set of four dies 1/4", 3/8", 1/2" and 5/8". Each set **3.80**
No. 201-F Dies only—3/16", 1/4", 5/16", 3/8", 1/2", and 5/8". Each size **1.00**
No. 202-F Replacement Cutter. Each ..... **.75**

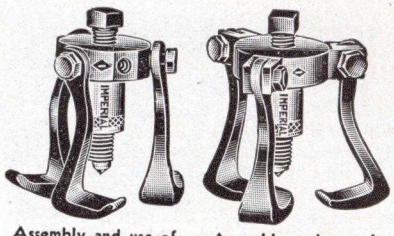
REFACING TOOL



This tool will reface seats in a few seconds and assures a tight, leak-proof joint. Reamer has five flutes which assures a smooth cut and eliminates chattering. Furnished with adapters to take 1/4", 5/16", 3/8", 1/2" and 5/8".

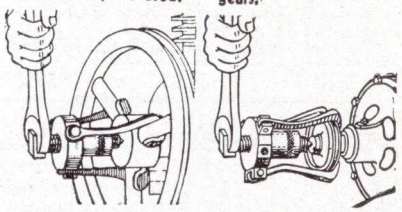
No. 98-F Tool complete. Price each **$5.85**
7/16" Adapter may be ordered separately.

No. 100-F Adapter only. Price each **$0.55**
No. 99-F Reamer only. Price each **3.75**



Assembly and use of puller for pulling spoked wheels. Either 2 or 3 arms may be used.

Assembly and use of puller for pulling solid wheels, pulleys and gears.



IMPERIAL UNIVERSAL PULLEY AND FLYWHEEL PULLER

Puller will take spoked wheels regardless of size, so long as the hub diameter is less than 3 inches and the wheel is within the depth reach of the puller. Will take solid wheels up to 7 inches outside diameter.

For wheels having an odd number of spokes it is used with 3 arms, and for wheels having an even number of spokes it is used with 2 arms. Arms are so designed that the puller can be used with wheels having tilted spokes and also with wheels which have a minimum amount of space between the seal plate and hub.

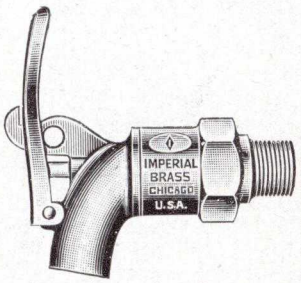
An adjustable sleeve prevents tilting of the screw when pressure is applied on 2 arm spoke-pulls.

When used to pull from the outside of solid wheels, this puller is assembled with arms suspended from clevises.

Arms are made from heat-treated chrome vanadium steel forgings and body is machined from cold drawn steel. Pressure screw is extra large so that screw head can be hammered in removing hard-to-start pulleys.

Net weight approx. 2 1/2 lbs. Length, 4 1/2-in. Diameter 4 1/8-in. Depth reach, 1 1/2-in.

No. 372-F Puller for solid and spoked wheels. Complete with clevises. Price Each **$6.85**
No. 370-F Puller for spoked wheels only. (Same as No. 372-F except furnished without clevises). Price Each. **5.85**
No. 371-F Clevises only. Per set of 3. Price **1.00**

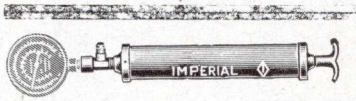


IMPERIAL SELF-CLOSING FAUCET

(For Steel Barrels and Drums)

Has 3/4" Iron Pipe Thread; fits a 1" opening in steel barrels and drums. Holds oil, kerosene, gasolene, alcohol, light varnishes, thinners and most other liquids. Has metal-to-metal seat. No washers to wear out. Opens by pushing lever handle, and closes automatically when handle is released. Handle is so designed that operating faucet will not tip or tilt barrel. Easily locked in open or closed position. Weight, 12 ounces each.

No. G-261 Imperial Self-Closing Faucet. Each..... **$1.10**



TEMPERATURE AND PRESSURE CONTROL PUMP

A pump for checking and adjusting pressure controls. Has double washer so that it will create pressures to 50 lbs. and vacuum to 28 inches with a single stroke of the plunger.

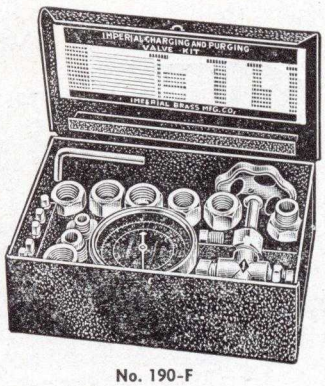
Double cup washers are back to back under constant spring tension. This keeps washers against barrel at all times, assuring full capacity.

Supplied with tee connection on the end, having 1/8" female iron pipe thread for gauge and 1/4" male flare on the branch.

When using a gauge with this pump, use Imperial No. 122-C Compound Gauge, 30" vacuum to 60 lbs. pressure.

No. 19-DT Pump. Barrel 5" x 1 1/2". Price each **$3.10**
No. 18-DT Pump. Barrel 8"x1 1/2". Price, each **3.35**

IMPERIAL SERVICE VALVE KIT FOR HERMETIC UNITS



No. 190-F

This is an improved service valve kit for charging, purging and testing an increased number of hermetically sealed units. Eliminates a separate valve for each unit. Valve equipped with hand wheel for easy operation. Special 3" compound retard gauge for pressure readings. Reads from 0 to 30" vacuum in inches and pressure scale from 0 to 50 lbs. with retard to 200 lbs. in 5 lb. graduations. Has temperature scale and rear pointer adjustment.

Kit furnished complete in special metal case so arranged that wheel handle and gauge need not be removed from valve when placed in box. Includes 10 adapters, 5 wrenches, 5 gaskets, plug for gauge connection; also a set screw wrench for loosening valve on machines requiring spline wrench. Chart on cover lists names of refrigerators and type of adapter and wrench required for servicing. Services following units using adapters and keys indicated (prices shown are for parts when furnished separately):

Machine Make	Adapter No.	Price Each	Wrench Used	Color of Wrench	Price Each
Airtemp	181-F-2	$0.40	181-F-13	Green	$0.72
Bohn SO_2	181-F-6	.40	Main Stem		...
Bohn CH_3CL	181-F-4	.40	181-F-12	White	.48
Coldspot (to 1934)	181-F-6	.40	Main Stem		...
Coldspot (1935 and later)	181-F-8	.40	181-F-11	Yellow	.72
Crosley	Valve Body Nut	...	181-F-13	Green	.72
Frigidaire	Valve Body Nut	...	Main Stem		...
Frigidaire (late models)	181-F-100	.40	Main Stem		...
General Electric	Valve Body Nut	...	181-F-13	Green	.72
General Electric (CG-1-A16)	181-F-90	.60	181-F-13	Green	.72
Gibson	181-F-3	.40	181-F-9	Red	.72
Grunow	181-F-3	.40	181-F-9	Red	.72
Majestic	Valve Body Nut	...	181-F-9	Red	.72
Servel	Valve Body Nut	...	181-F-9	Red	.72
Sparton	181-F-3	.40	181-F-9	Red	.72
Trukold	181-F-3	.40	181-F-9	Red	.72
U.S.R. & Tel.	181-F-7	.40	181-F-9	Red	.72
Westinghouse (large float)	181-F-5	.40	181-F-9	Red	.72
Westinghouse (small float)	181-F-2	.40	181-F-10	Blue	.48

		Price Each
No. 182-F	Service Valve Kit without gauge	$10.00
No. 190-F	Service Valve Kit complete with 3" compound retard gauge	12.35
No. 189-F	Service Valve Kit same as 190-F except gauge is 2½"	12.10
No. 181-F	Valve only ¼" flare (with gauge connection and plug)	1.80
No. 181-F-17	Steel Stem	.55
No. 181-F-14	Small Gasket	.05
No. 181-F-15	Large Gasket	.05

IMPERIAL CHARGING LINE

This charging line is built to give long, reliable service. Has a special composition core, covered with a heavy 2-braid woven fabric and an outer covering of synthetic rubber. This line is extremely flexible, and will not break under repeated flexing and twisting.

Furnished with two copper tube extensions assembled by brass connections with ¼" male flare thread.

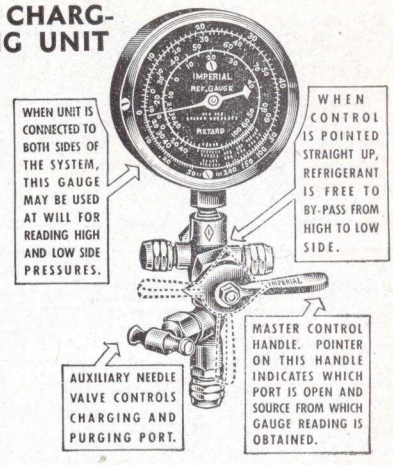
Catalog No.	Overall Length	Price Each
179-FT	36"	$2.35

PURGING HOSE

Good quality red rubber hose, ½" outside diameter, ¼" inside diameter. Boxed in 50 foot coils.

No. 265-C Imperial Purging Hose—Price per 50-foot coil $2.20

IMPERIAL HI-LO CHARGING AND TESTING UNIT


WHEN UNIT IS CONNECTED TO BOTH SIDES OF THE SYSTEM, THIS GAUGE MAY BE USED AT WILL FOR READING HIGH AND LOW SIDE PRESSURES.
WHEN CONTROL IS POINTED STRAIGHT UP, REFRIGERANT IS FREE TO BY-PASS FROM HIGH TO LOW SIDE.
IMPERIAL REF. GAUGE
RETARD
MASTER CONTROL HANDLE. POINTER ON THIS HANDLE INDICATES WHICH PORT IS OPEN AND SOURCE FROM WHICH GAUGE READING IS OBTAINED.
AUXILIARY NEEDLE VALVE CONTROLS CHARGING AND PURGING PORT.

This is an entirely new type of charging and testing unit which combines all the advantages of a double gauge unit with the lightness, compactness and ease of handling of a single gauge unit. When connected to both sides of system, permits reading the pressure on either the high or low side at any time with a single gauge and a single valve. Also permits by-passing, from high to low side, whenever desired, without capping the charging and purging port.

May be used for: charging liquid gas in high side; charging gas into low side; purging gas from gauge lines; purging air or gas from high side; charging oil in low side; testing low side for leaks; setting low side controls; setting expansion valves. In addition, it may also be used separately on the high or low side with exceptional convenience.

Simple and speedy to operate. Has a single master control handle which operates a double-acting valve.

Unit also has an auxiliary needle valve which controls the charging and purging port at the center.

Valve body and handle pointer are made of brass forgings. Stem is made of steel and is of heavy-duty, double-seating type. Valve seats are extra large giving practically a full opening to both sides. Triple lead thread on stem assures fast, positive valve action.

Valve body is machined for ⅛" female iron pipe thread at all three connections. ¼" half unions are screwed into body so that they can be replaced should the threads become worn, or should elbow connections be desired.

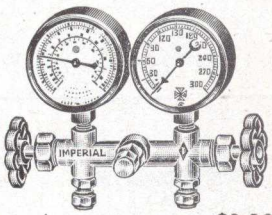
No. 505-C Imperial Hi-Lo Charging and Testing Unit. Furnished with No. 284-C 3" black face compound gauge. 0-30" vacuum scale in one inch calibrations. Pressure to 50 lbs. with retard to 200 lbs. Has rear calibrator. Price each $6.05

No. 504-C Same as No. 505-C, excepting with No. 284-C 2½" gauge. Price each 5.80

No. 500-C Same as above, excepting with 2½" compound gauge. 0-30" vacuum in 5" graduations, 0-150 lbs. pressure with retard to 250 lbs. Has rear calibrator. Price each 5.80

No. 501-C Same as above, but less gauge. Price each .. 3.70

No. 300-C CHARGING AND TESTING UNIT



Back seating type valves, an added precaution against leaks not found in units which do not have this feature. Wheel handles for quick adustment of valves.

All connections are for ¼" O.D. flare.

No. 300-C Unit less gauges. Price each $3.30
No. 300-C Unit with 2" gauges. Price each 5.70
No. 301-C Unit with 2½" gauges. Price each 6.15

The Compound Gauge, 30" to 60 lbs., on No. 301-C can be furnished with temperature scale at no extra charge. If desired specify with temperature scale.

No. 400-C IMPERIAL CHARGING AND TESTING UNIT

The valve is of back seating type. Furnished with wheel handle to adjust valve quickly and eliminate use of ratchet wrench.

Connections for ¼" O.D. with ⅛" female iron pipe thread on top for gauge.

Furnished with or without gauge.

No. 400-C With 2½" compound gauge .$3.45
No. 400-C With 2" compound gauge ... 3.25
No. 400-C Without gauge 1.85

IMPERIAL RATCHET WRENCH

A steel forged ratchet wrench, especially adapted for use on small refrigerant cylinders, shut-off valves, packing gland wrenches, etc. Ratchet has 1/4" square opening and raised face. Handle of wrench has 3/16" square opening, 1/4" square opening and 1/2" hex.

No. 123-C Ratchet Wrench. Price Each **$1.15**

IMPERIAL REVERSIBLE RATCHET WRENCH

The ratchet may be instantly reversed by the convenient rounded control. Wrench is made of drop forged steel. Ratchet has 1/4" square opening. Handle openings are 3/16" and 1/4" square with 1/2" hex socket.

No. 138-C Imperial Reversible Ratchet Wrench.
Price Each **$1.25**

IMPERIAL PACKING GLAND WRENCHES

Imperial Packing Gland Wrenches are drop-forged of selected steel and are carefully heat-treated to bring out the ultimate strength of the steel. They are designed to fit the packing gland nuts on refrigeration valves.

No. 103-C

Obround opening 1/2" long x 3/8" wide. 1/4" Square Drive. Outside Diameter 23/32". Overall Length 1 7/32". Price Each **$0.55**

No. 228-C

Prongs 1/8" Deep x 1/8" Wide. 1/4" Square Drive. Inside Diameter 21/64". Outside Diameter 15/32". Overall Length 1 3/4". Price Each ... **$0.65**

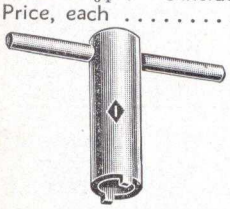
No. 229-C

1/4" Square Drive. 9/16" Outside Diameter. Overall Length 1 3/8". Furnished with the following socket openings:

3/8" Square. Price each **$0.50**
1/4" Square. Price each ..... **.50**
5/16" Square. Price each ..... **.50**

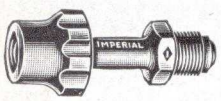
No. 230-C

Tee Handle Type, Prongs 1/8" Deep x 1/8" Wide. Inside Diameter 21/64". Outside Diameter 15/32". Overall Length 2". Price, each **$0.55**



No. 231-C

Tee Handle Type. Prongs 1/8" Deep x 1/8" Wide. Inside Diameter 21/64". Outside Diameter 9/16". Overall Length 2".
Price each **$0.55**



IMPERIAL KWIK KUPLER

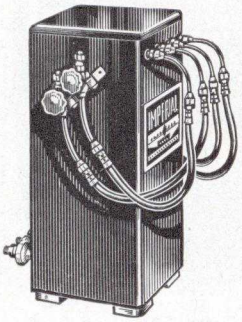
(Patent Pending)

A swivel coupler for quickly connecting charging lines to service drums, to charging and testing units, and many other uses. One of the chief uses of this coupler is for refrigerant transfer service. No wrenches need to be used and no possibility of costly delay caused by broken flares.

Imperial "Kwik-Kuplers" embody a soft composition seal gland in the swivel nut connection. This seal gland makes a pressure tight seat with the male flare fitting when the swivel nut is made **finger tight.** The nut is extruded to form a special pattern, permitting a better grip so that the joint can be made with minimum force of the fingers.

For maximum benefits from your "Kwik-Kupler" attach one to each of your charging lines and gauge lines.

No. 474-C 1/4" Flare Swivel x 1/4" Male Flare.
Price Each **$0.85**
No. 477-C 1/4" Flare Swivel x 1/4" Female Flare
Price Each ..... **.95**
No. 36938 Extra Seal Gland. Price Each ..... **.10**



IMPERIAL REFRIGERANT TRANSFER UNIT

The Imperial Refrigerant Transfer Unit is used to transfer refrigerant from large cylinders to small cylinders used by installation and service engineers.

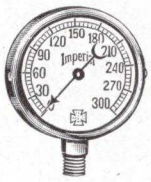
This unit operates on the principle of cooling the refrigerant before it enters the drums. This method has been proven by experience to be more efficient and offer less hazards than other methods. Four different refrigerants may be transferred through this unit at a rate of better than five pounds per minute. This is one of the most trouble-free and fastest methods of transferring refrigerant.

Strainers are recommended to be placed on inlet connections of unit for protection of valves. Size of unit 25 3/8" high x 11" wide x 11" deep.

Furnished complete with:
4 No. 178-FT 30" Charging Lines.
4 No. 193-CD 1/4" Dia-Seat Valves.
4 No. 670-F 1/4" Swivel Unions.
4 No. 48-C 3/8" O.D. x 3/8" I.P.T. Strainers.
4 No. 648-F 1/4" O.D. Half Unions.

No. 476-C Imperial Refrigerant Transfer Unit, complete **$78.85**
No. 475-C Imperial Refrigerant Transfer Unit, less Charging Lines, Valves, Swivel Unions and Strainers.. **57.95**

PRESSURE GAUGES



These gauges are of sturdy construction with steel case and a completely independent movement and dial. The socket, bourdon tube, movement dial and pointer comprise an integral unit which will function with accuracy.

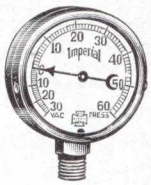
Some of the gauges developed by our engineers have some outstanding features for refrigeration work.

No. 121-C Pressure Gauges

Furnished in 2" or 2 1/2" Case in either 1/8" or 1/4" Male I.P.T.

0— 30 lbs.)
0— 50 ")
0—100 ") Price
0—150 ") 2" —**$1.00** Each
0—200 ")
0—300 ") 2 1/2"—**$1.20** Each
0—500 ")

Specify Cat. No., Reading, Size of Case and I.P.T.



No. 122-C COMPOUND GAUGES

Furnished in 2" or 2 1/2" Case in either 1/8" or 1/4" Male I.P.T.

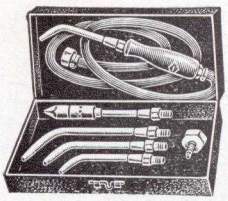
30"—60 lbs. Vacuum in Inches.
30"—100 lbs. Vacuum in 2 inch Calibrations.
30"—150 lbs. Vacuum in 5 Inch Calibrations.
Price—2"—**$1.30** Each.
Price—2 1/2"—**$1.50** Each.
Specify Cat. No., Reading, Size of Case and I.P.T.

COMPOUND RETARD GAUGES

With Rear Pointer Adjustment
No. 284-C

2 1/2" Case—1/8" Male I.P.T.
30"—50 lbs. Retard to 200 lbs. Vacuum in inches.
Has Freon, Sulphur Dioxide and Methyl Chloride Temperature Scale.
Price each **$2.10**

3" Case 1/8" Male I.P.T. 30"—50 lbs. Retard to 200 lbs. Vacuum in inches.
Has Freon, Sulphur Dioxide and Methyl Chloride Temperature Scale. Price each **$2.35**
Specify Size of Case.



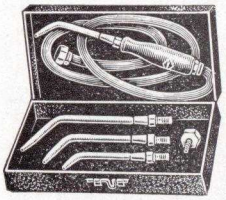
No. 32 HI-DUTY SOLDERING and BRAZING OUTFIT

The No. 32 is an excellent outfit for refrigeration work and for all kinds of heavy and light soldering and brazing. Torch burns acetylene, the tips drawing oxygen from the atmopshere, producing a very hot flame.

The No. 32 outfit consists of:

Type K-1 tip and mixer assembly for fine soldering.
Type K-2 tip and mixer assembly for light soldering.
Type K-3 tip and mixer assembly for medium soldering.
Type K-4 tip and mixer assembly for heavy soldering.
Type K-5 soldering iron stem complete with type K-6 soldering copper.
Type K-8 Torch handle.
No. 258-H Prest-O-Lite tank unions for style B (40 ft.) and E. (30 ft.) tanks.
No. 257-H Prest-O-Lite tank union for style MC (10 ft.) tank.
No. 305H-6 (6 ft. length) red acetylene hose.
No. 17922 Hose clamp.

No. 32 Hi-Duty Outfit. Each **$8.95**



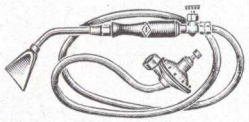
No. 34 HI-DUTY SOLDERING and BRAZING OUTFIT

This soldering outfit is the same as the No. 32 Outfit described above except that it does not have the soldering iron stem and copper. No. 34 Outfit includes:

Type K-1 tip and mixer assembly for fine soldering.
Type K-2 tip and mixer assembly for light soldering.
Type K-3 tip and mixer assembly for medium soldering.
Type K-4 tip and mixer assembly for heavy soldering.
Type K-8 torch handle.
No. 258-H Prest-O-Lite tank unions for Style B. (40 ft.) and E (30 ft.) tanks.
No. 257-H Prest-O-Lite tank union for Style MC (10 ft.) tank.
No. 305H-6 (6 ft. length) red acetylene hose.
No. 17922 hose clamp.

No. 34 Hi-Duty Outfit. Each **$6.50**

No. 35 PAINT BURNING OUTFIT



The No. 35 outfit will thoroughly remove all paint from wood, steel, etc., leaving surface clean and ready for resurfacing, with no acid or sooty blotches to affect the new paint. By means of the needle valve the length of the flame can be varied. This outfit can be used indoors as well as outdoors.

The No. 35 outfit consists of:

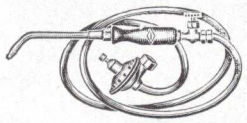
Type K-15 Burner consists of K-9 torch handle with needle valve and type K-7 flame spreader, stem and mixer.
Type 9-R Pressure Regulator.
No. 211-H x $\frac{3}{16}$" Hose connection.
No. 17922 Hose clamp.

No. 35 Paint Burning Outfit. Each **$9.50**
(Hose is not included. Order No. 305-H $\frac{3}{16}$" I.D. corrugated red hose in length desired.)

PAINT BURNER

The fastest and best equipment for removing paint from wood, steel, etc. Leaves surface clean and ready for resurfacing. Type 9-R Pressure Regulator must be used with burner. This is important.

No. K-15 Burner Complete. Each **$4.95**
No. K-7 Flame spreader, stem and mixer. Each **2.25**
Flame spreader and stem only. Each **1.25**
Mixer for stem. Each **1.00**



No. 33 OUTFIT

The No. 33 is especially suited for installation of solder fittings. Concentrated flame can be directed evenly, assuring a thorough spread of solder without overheating any part of fitting. Regulator holds gas at a uniform working pressure, and the needle valve added to torch handle permits gas to be turned on or off conveniently.

The No. 33 outfit consists of:

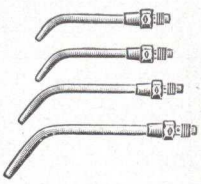
Type K-9 Torch handle with needle valve.
Type K-4 tip and mixer assembly for heavy soldering.
Type 9-R Constant pressure regulator.
No. 305H-15 (15 ft. length) red acetylene hose.
No. 211-H x $\frac{3}{16}$" hose connection.
No. 17922 Hose clamp.

No. 33 Outfit. Each **$8.50**

TORCH HANDLE

Type K-9 Torch handle with needle valve and hose connection. Each **$2.60**
Type K-8 Torch handle without needle valve and hose connection. Each **1.00**

TORCH TIPS WITH MIXER ASSEMBLIES



	Price Each
Type K-1 Tip with Mixer Assembly, for fine soldering	**$1.75**
Type K-2 Tip with Mixer Assembly, for light soldering	**1.90**
Type K-3 Tip with Mixer Assembly, for medium soldering	**1.90**
Type K-4 Tip with Mixer Assembly, for heavy soldering	**1.90**

STEMS ONLY LESS MIXER ASSEMBLIES

No.		Price Each
K1-S	Stem only (less mixer assembly) for type K-1 tip	**$0.75**
K2-S	Stem only (less mixer assembly) for type K-2 tip	**.90**
K3-S	Stem only (less mixer assembly) for type K-3 tip	**.90**
K4-S	Stem only (less mixer assembly) for type K-4 tip	**.90**

SOLDERING IRON STEM COMPLETE With Soldering Copper

	Price Each
Type K-5 Soldering iron stem complete with stem, sleeve, mixer and type K-6 soldering copper	**$2.75**
Type K-17 Stem and sleeve assembly	**.75**
Type K-16 Sleeve only	**.40**
Type K-6 Soldering copper only	**1.00**

MIXER ASSEMBLIES

		Price Each
K1-M	Mixer assembly for type K-1 tip	**$1.00**
K2-M	Mixer assembly for type K-2 tip	**1.00**
K3-M	Mixer assembly for type K-3 tip	**1.00**
K4-M	Mixer assembly for type K-4 tip	**1.00**
K5-M	Mixer assembly for type K-5 soldering iron	**1.00**

NEEDLE VALVES

No. 33490 Needle Valve for type K-9 torch handle. Each. **$1.25**

IMPERIAL HALIDE GAS LEAK DETECTOR

The Imperial Halide Gas Leak Detector is a positive detector of non-combustible gases in refrigerating and air conditioning units.

It connects to the type K-9 Imperial Torch handle and to standard handles of other make soldering torches. The hose which slips over the inlet tube is used to locate the leak of chlorinated refrigerants that are non-combustible, such as Freon and Carrene. A leak turns the flame from a blue color to green.

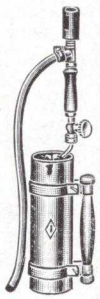
UNDER NO CIRCUMSTANCES SHOULD ANY FLAME LEAK DETECTOR BE USED FOR LOCATING LEAKS OF ANY COMBUSTIBLE GAS.

The Imperial Halide Gas Leak Detector, cannot, of course, be used with ordinary refrigerant gases such as Carbon Dioxide and Sulphur Dioxide, because these gases do not cause a flame color change, the basis of its action.

Type K-10 Imperial Halide Gas Leak Detector only, without hose. Price Each **$2.75**

No. 161C-4 Rubber Hose for use on Gas Leak Detector. (4 ft. length) ..... **.44**

No. 39 IMPERIAL HALIDE GAS LEAK DETECTOR OUTFIT



Provides complete equipment (with the exception of the Prest-O-Lite tank) for locating leaks of non-combustible chlorinated refrigerants. The Imperial Halide Gas Leak Detector is a positive detector of non-combustible gases in refrigerating and air conditioning units.

Imperial No. 39 Outfit Consists of:

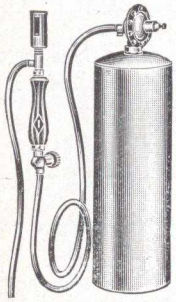
Type K-10 Halide Gas Leak Detector.
No. 161C-4 (4 ft. length) rubber hose.
No. 17922 Hose clamp.
Type K-9 Torch handle with needle valve.
No. 34529 MC tank-to-torch adapter.

No. 39 Imperial Halide Gas Leak Detector Outfit. Price **$6.50**

No. 37 Imperial Halide Gas Leak Detector Outfit, same as No. 39 Outfit excepting has No. K-14 Handle for MC tank. Price **7.50**

No. K-14 MC Tank Handle Assembly. Price **1.00**

No. 40 IMPERIAL HALIDE GAS LEAK DETECTOR OUTFIT



The Imperial Halide Leak Detector with the B tank

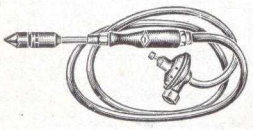
The Imperial Halide Leak Detector can be connected to the Prest-O-Lite tank with a hose for testing in places where space is limited. In this case it is absolutely necessary that a 9R Pressure Regulator be used as shown in the illustration. This prevents subjecting the hose to full cylinder pressure.

Imperial No. 40 Outfit consists of:

Type K-10 Halide gas leak detector.
No. 161C-4 (4 ft. length) Rubber hose for attaching to leak detector.
Type K-9 Torch handle with needle valve.
Type 9-R Regulator.
No. 305H-6 (6 ft. length) corrugated red hose with
No. 211-H x $\frac{3}{16}$" hose connection for attaching to torch handle and regulator.
2 No. 17922 Hose clamps.

No. 40 Imperial Halide Gas Leak Detector Outfit. Price. **$11.75**

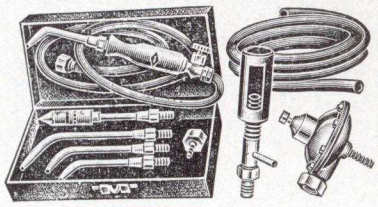
No. 36 SOLDERING IRON OUTFIT



The No. 36 is recommended for fine soldering, such as all types of electrical work in refrigeration, air conditioning, telephone switchboard, automotive and radio. The No. 36 Outfit consists of:

Type K-8 Torch handle. Type K-5 Soldering iron stem.
Type 9-R Pressure regulator. 2 No. 17922 Hose clamps.
No. 305H-6 (6 ft. length) red acetylene hose.

No. 36 Soldering Iron Outfit. Each **$9.00**



No. 38 IMPERIAL HALIDE LEAK DETECTOR AND SOLDERING OUTFIT

This Imperial combination Halide Gas Leak Detector and Soldering Outfit provides equipment for locating leaks of non-combustible chlorinated refrigerants and also a torch for soldering, brazing and heating.

For leak detection work, the torch handle is used with the type K-10 Gas Leak Detector unit. For soldering, brazing or heating, it is used with the soldering tips. There are four tips to take care of light, fine, medium and heavy work.

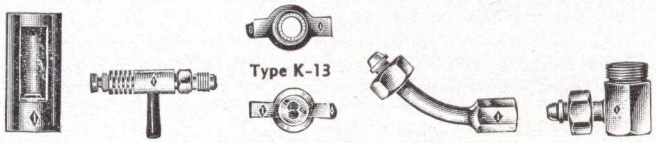
To prevent subjecting the hose to full cylinder pressure, the type 9-R Regulator included with outfit must be used.

IMPERIAL NO. 38 OUTFIT Consists of:

Type K-9 Torch handle with needle valve.
Type K-10 Halide gas leak detector.
No. 161C-4 (4 ft. length) Rubber hose for attaching to leak detector.
No. 305H-6 (6 ft. length) Red acetylene hose with
No. 211-H x $\frac{3}{16}$" Connection, for attaching to torch handle.
2 No. 17922 Hose clamps.
1 each Types K-1, K-2, K-3, K-4 Soldering tips.
Type K-5 Soldering iron stem complete with type K-6 soldering copper.
Type 9-R Regulator.

No. 38 Imperial Halide Gas Leak Detector and Soldering and Brazing Outfit. Price Each **$20.50**

REPAIR PARTS FOR GAS LEAK DETECTORS



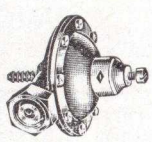
Flame Shield Assembly | Air Mixer Assembly | Type K-13A Copper Reaction Plate | Adapter No. 34529 | No. 273-H Adapter

Type K-12 Flame Shield Assembly. Price **$1.00**
Type K-11 Air Mixer Assembly. Price **2.00**
Type K-13 Copper Reaction Plate. Price ..... **.15**
Type K-13A Reaction Plate. New Style. Price ..... **.35**
No. 34529 MC tank-to-torch adapter. Price ..... **.75**
No. 273-H MC tank-to-regulator adapter. Price **2.00**

No. 257-H | No. 258-H | No. 17922 | No. 305-H

No. 258-H Prest-O-Lite tank unions for style A, B or E tanks. Each **$0.35**
No. 257-H Prest-O-Lite tank union for style MC tank. Each ..... **.35**
No. 305-H $\frac{3}{16}$" I.D. corrugated red hose less connections. In less than 50 foot lengths. Price per ft. .... **.14**
In lengths of 50 to 99 feet, less connections. Per ft. .. **.12**
100 feet or more, less connections. Per Ft. ..... **.11**
No. 17922 Hose clamp. Each ..... **.06**
No. 211-H $\frac{3}{16}$" Hose connection. Each ..... **.24**

TYPE 9-R PRESSURE REGULATOR



The type 9-R pressure regulator automatically holds the gas at uniform line pressure whether the tank is full or nearly empty. It permits the turning on or off of the gas without disturbing the tank valve. Insures economical gas consumption under all operating conditions.

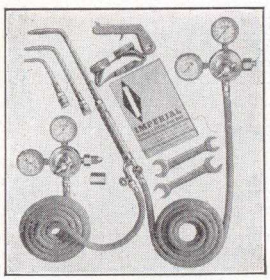
Fits directly to the type B, 40-ft. Prest-O-Lite tank, but can be used with an MC tank by means of a No. 273-H adapter.

Type 9-R Pressure Regulator. Each **$5.00**

IMPORTANT NOTICE

To conform with current government regulations Imperial Welding Outfits are priced without torch tips and hose connections. The illustration of outfit shows complete assembly, although torch handles, tips, hose connections and wrenches are priced separately.

IMPERIAL No. 1178 WELDING OUTFIT



This is an "All Purpose" outfit ideally suited to the requirements of refrigeration service repair shops. With this outfit, each Regulator is furnished with two Gauges, enabling the operator to know the cylinder as well as the working pressures of the gases being used. This is an advantage since it eliminates the possibility of running out of gas when a job is in progress.

No. 1178 Welding Outfit consisting of regulators, hose, goggles, lighter and hand book **$34.02**

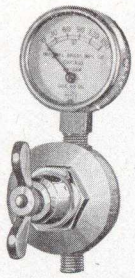
SUPPLEMENTARY ITEMS

1 **Type 8X** Torch Handle only **$10.57**
1 **No. 1SC** Welding Tip **3.50**
1 **No. 3SC** Welding Tip **3.50**
1 **No. 6SC** Welding Tip **3.50**
2 **No. 210-H** 1/4" Hose Connections ..... **.48**
2 **No. 211-H** 1/4" Hose Connections ..... **.48**
1 **No. 97-H** Torch Wrench ..... **.45**
1 **No. 98-H** Regulator Wrench ..... **.50**
No. 1178 Welding Outfit Complete **57.00**

No. 1178-C WELDING AND CUTTING OUTFIT

Consisting of:
No. **1178 Outfit** with Supplementary Items **$57.00**
1 **Type 8X** Cutting Attachment less tip and wrench .. **16.80**
1 **No. 2R** Cutting Tip **3.00**
1 **No. 96-H** Wrench ..... **.20**
No. 1178-C Welding and Cutting Outfit Complete ... **77.00**

IMPERIAL PIPE LINE AIR REGULATOR

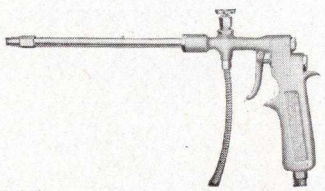


This Pipe Line Air Regulator is for use wherever it is necessary to reduce and control air pressure. It is equipped with 100 lbs. gauge and 2" diaphragm. Has regulating screw which can be set so regulator will deliver air at any desired reduced pressure within regulator capacity. The gauge reads in terms of outlet pressure.

Inlet is located in rear of regulator and is threaded 1/2" male I.P.T. and 1/4" female I.P.T. Outlet at bottom is 1/4" I.P.T.

No. 74-C Air Regulator. Price each **$9.00**

IMPERIAL MACHINERY CLEANER



For use with kerosene and compressed air.

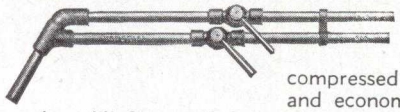
Gives a very powerful spray which quickly removes dirt and grease from machinery and condensers.

Air is controlled by a trigger valve, and the amount of kerosene is regulated by a needle valve.

Furnished with a 6-foot length of flexible metal hose, 1/4-inch hose spud connection and extra washer and seat assembly.

No. 37-C Machinery Cleaner. Net Each **$4.85**
No. 28502 Hose Spud Connection only. Net Each .... **.25**

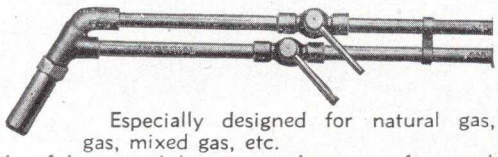
ILLUMINATING GAS and AIR BLOW TORCHES



These torches, for use with illuminating gas and compressed air, are very efficient and economical for preheating small work. All four sizes are used in machine and repair shops for soldering, brazing, heating and annealing tools, and for hardening and brazing numerous items.

Torch No.	Inside Diameter of Air Nozzle	Inside Diameter of Gas Nozzle	Outside Diameter of Tubing at Hose End	Price Each
R-0	1/16 inch	1/4 inch	5/16 inch	**$2.50**
R-1	1/8 inch	21/64 inch	3/8 inch	**2.75**
R-2	1/4 inch	33/64 inch	9/16 inch	**3.50**
R-3	9/32 inch	22/32 inch	5/8 inch	**4.50**

NATURAL GAS and AIR TORCHES



Especially designed for natural gas, artificial gas, mixed gas, etc.

Made of brass and has two valves, one for regulating the compressed air and one for regulating the gas, giving a fine adjustment of the flame.

The construction of the torch is such that the gas and compressed air are properly mixed before they reach the point of combustion, thus assuring the greatest efficiency and lowering operating costs.

Torches are made in five sizes to take a wide range of work from very fine small work to heavy preheating work.

These torches are used by engineers, installation and service men for preheating and soldering.

No. NR000—Torch is especially designed for use where a very fine needle flame is required. O.D. at hose end 5/16" Each **$5.00**

No. NR00—Gives a larger flame for faster work. O.D. at hose end 5/16". Each **$5.00**

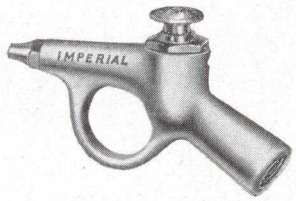
No. NR0—Similar to NR00 but larger. O.D. at hose end 5/16". Each **$5.00**

No. NR1—O.D. at hose end 3/8". Each **$5.50**

No. NR2—Used for heavy soldering, brazing and heating. Similar to NR1 but larger. O.D. at hose end 9/16". Each.... **$8.00**

No. NR3—Similar to No. NR2 but larger for extra heavy soldering, brazing and heating. O.D. at hose end 5/8" Each **$14.00**

IMPERIAL AIR NOZZLE



An inexpensive button control air nozzle. Handy for use on compressed air lines to blow dirt and other foreign substances from machinery, motors and hard to get at places. Designed so that it may be held comfortably in the hand.

This air nozzle has spring loaded packing, together with a seat at stem end. These features eliminate loss of air when valve is in open position.

Has oil-proof special synthetic rubber washer. Standard Schrader air chuck washer can be used for replacement.

Hose connection is 1/4" Female Iron Pipe Thread.

No. 47-A Air Nozzle. Net Each **$1.00**
No. 28776 Washer Only. Net Each ..... **.05**
No. 36926 Nozzle tip only. Net Each ..... **.24**
No. 140-C Nipple. Order extra when 1/4" Male I.P.T. is desired at inlet. Net Each ..... **.24**

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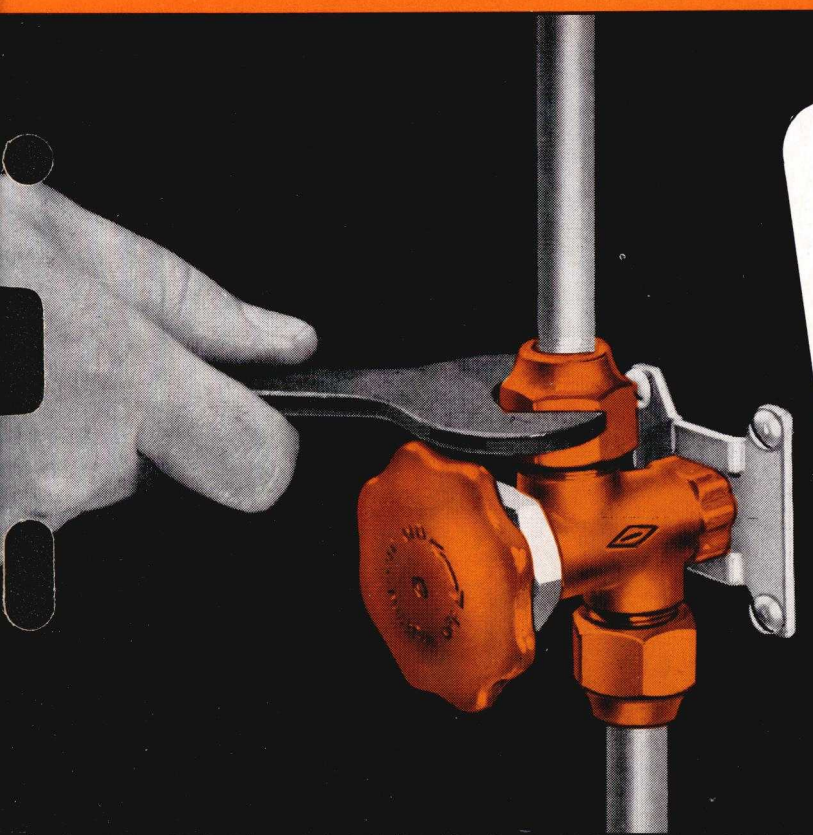
The Imperial Brass Manufacturing Company
Chicago 7, Illinois, U. S. A.

IMPERIAL FITTINGS
—they STAY tight

The success of any refrigeration or air conditioning system is absolutely dependent upon tight connections that *stay* tight.

Imperial Refrigeration Fittings have been especially designed for this service. Nuts, tees and elbows are made from brass forgings and will not crack or split. They are heavier and stronger than the standard S. A. E. fittings and are non-porous, eliminating any possibility of seepage and season cracking. Female couplings and cap nuts are made from extruded bronze rod which, because of its higher copper content, is not subject to season cracking. Tees and elbows have flats for wrench hold.

Imperial Fittings have won a reputation for their accurate threads and carefully machined seats. Their record over the years on every type of application has shown that they consistently make tight connections that *stay* tight.



With SYLPAK valves you get double security

In the Imperial Sylpak valve you get the double security of a Sylphon bellows plus a good spring loaded packing. It stands up under pulsations, vibration and excess pressure and it can be used with any refrigerant except ammonia.

Sylpak valves are made for tube diameters from 1/4" to 3/4" for S.A.E. or solder fittings as desired. Other types of Imperial valves also include backseating shut-off valves, compressor valves, relief, service drum and throttling valves.

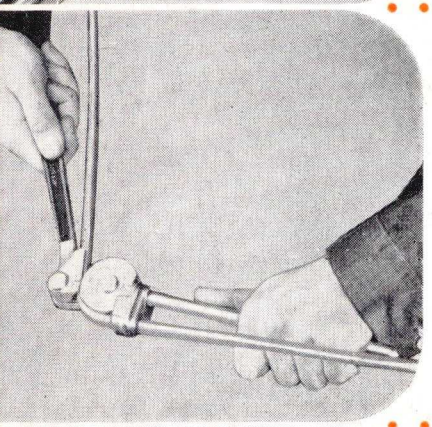
IMPERIAL TUBE-WORKING TOOLS will help you improve your tubing connection work

CUTTING

One of the tools most widely used in the refrigeration field is the Imperial No. 174-F roller-type tube cutter with groove for cutting off flares. Other types also available.

FLARING

For making tight connections that *stay* tight an Imperial flaring tool is a *must* item in every tool kit. Illustrated is the No. 195-F flaring tool with quick slip-on yoke.

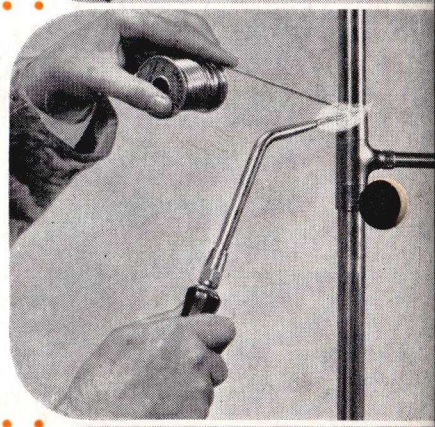


BENDING

Imperial tube benders include spring benders as well as hand benders of the type shown here. This tool, No. 364-F, is an open side bender that positions anywhere on tubing and can be used in hard-to-get-at places.

SOLDERING

No. 32 Imperial soldering outfit includes torch, 4 tips, soldering iron, hose and tank connections. With the outfit you can speed up your soldering and turn out tight joints.

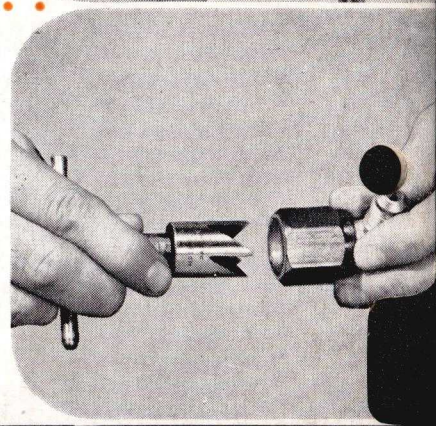


SWEDGING

For joining two pieces of copper tubing of the same size without using a fitting, use an Imperial swedging tool. No. 195-S kit, including flaring bar and 4 swedging tools, will handle 1/4″, 3/8″, 1/2″ and 5/8″ tubing.

REFACING

You can reclaim S.A.E. flare fittings that have become nicked or marred by using a No. 98-F refacing tool. Includes cutter and 5 adapters to handle 1/4″, 5/16″, 3/8″, 1/2″ and 5/8″ fittings.



THE IMPERIAL BRASS MFG. CO., 1200 W. Harrison St., Chicago 7, Ill.

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